A STUDY OF PERSONALITY CHARACTERISTICS OF UNDER-ACHIEVERS ACROSS ANY TWO SCHOOL DISCIPLINES

DISSERTATION

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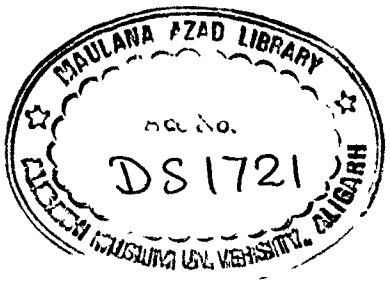
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CERTIFICATE

This is to certify that the dissertation entitled 'A STUDY OF PERSONALITY CHARACTERISTICS OF UNDER-ACHIEVERS ACROSS ANY TWO SCHOOL DISCIPLINES', submitted by Mrs. Swapna Neog, in partial fulfilment of M.Phil.(Edu.) degree of Aligarh Muslim University, Aligarh, is her original contribution. She prepared this dissertation under my guidance and supervision.

I consider this dissertation fit for submission for the degree of M.Phil.in Education.

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1.9.1990

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(MRS.) SWAPNA NEOG

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Chapter I

INTRODUCTION

Achieving not up to the expected level has now become a menacing problem not only in India but also in the schools of the most advanced countries of the world (Writh, 1977; Clark et al., 1981; Garlet et al., 1985; Dianne, 1986). It is quite recently that the research workers in the field of academic achievement have come to realise the growing danger of under-achievement (Ridding, 1966; Saxena, 1972; Haq, 1987). India, where illiteracy has assumed gigantic shape (64 %), under-achievement is adding a new dimension to the problem.

Though the problem of under-achievement among the students can be traced back to the inception of the concept of measured intelligence, it was objectifiably comprehended and statistically recognised with methodological accuracy by Throndike in 1963. Baffled by the failure of prediction in relation to the discrepant achievers, the workers in the field focussed their attention on finding out the causal and concomitant factors of over-achievement, that is achieving above

the expected level and under-achievement, that is achieving below the level expected on the basis of intelligence. In the words of Throndike, "It is necessary to define over- and under-achievement as discrepancies of actual achievement from the predicted achievement, predicted upon the basis of the regression equation between aptitude and achievement" (Throndike, 1963, p.13).

As it happens with all conceptual and methodological phenomena at the beginning stage, the new-found-land, i.e., the over-under achievement phenomenon generated much confusion in research operations. Over- and under-achievement being methodologically very 'tricky' got muddled up with high and low achievement or success and failure in many a research work (Curry, 1961; Parsley et al., 1964, Jaygopal, 1974; Tandon, 1978), while the two concepts are vitally different from each other.

It has by now become an established fact that intelligence and academic achievement are so closely related to each other -- as it has been evidenced by a very large number of investigations (McCandless et al., 1972; Mehryar and Khajavi, 1973; Chaterji and Mukerji, 1974; Kohli, 1976; Crano et al., 1979; Glossop et al., Nagpal, 1979; Roberge and Flexer, 1981; Yule et al., 1982) -- that it can be safely said that intelligence

is the most important predictor of academic achievement. However, the relationship between the two variables has never been found to be perfect. A chunk of population has in such studies always remained unpredicted that is either the subjects have fallen above or below their predicted levels. This kind of discrepant achievement was realised by the early workers in the field like Pintner (1922), Peters (1926), and Burt (1937) also, but they failed to identify exactly what caused the failure of prediction in such cases. Believing in the perfect relationship between intelligence and achievement they held some methodological error in testing itself as responsible for the failure of prediction. However it was Burt (1937), that indicated the role of schools in contributing towards the over- and under-achievement of the pupils -- caused by the 'pull and push' force of the schools. Since that time the research workers have been trying to find out factors responsible for discrepant achievement going unpredicted by intelligence.

The research workers have explored the problem from different directions. A large number of studies were carried out to find out the extent of relationship between academic achievement and different dimensions of personality, extraversion and neuroticism (Savage, 1966; Menon, 1972); anxiety (Rai, 1974;

Tandon, 1978; Vora, 1978; Traub, 1984); adjustment (Srivastava, 1967; Sharma, 1972; Kumawat, 1984); need achievement (Rao, 1963; Koul, 1978; Ruhland, Gold and Fled, 1978) and study habits (Vanarasi, 1970; Saxena, 1972). Some investigators found out the relationship between environmental climate and scholastic achievement (Curry, 1961; Tiegland et al., 1966; Miner, 1968; Jain et al., 1985).

These explorations did reveal quite significant relationship between academic achievement and certain personality factors as well as certain environmental factors. In these studies the high achieving groups have been found to be more adjusted, more prone to introversion, possessing better study habits and having lower level of anxiety. The low achieving groups have been found to be less adjusted, more prone to extroversion, possessing poor study habits and high level of anxiety. Environmental conditions at home and school have also been found to be playing a vital role in the academic performance of the children.

Many a research work has been done in this field with conceptual and methodological misconception. The workers tried to find out the personality characteristics of high and low achievers but perhaps due to some misunderstanding referred them as over- and under-achievers. Some research workers in this field

have derived the individual discrepancies from the group achievement mean scores and dubbed as over- and under-achievement (Parsley et al., 1964; Jarvis, 1965). Many other investigators calculated the discrepant achievement from a single comparison between ability and achievement scores (Shaw and McCuen, 1960; Curry, 1961) and some other investigators worked out over- and under-achievement following some arbitrary norms for their studies (Joygopal, 1974; Tandon, 1978).

As such these studies, though provided quite considerable data on the relationship of personality and achievement, did not study the phenomenon of over- and under-achievement as it precisely stands for.

Any research work demands a clear conception of the phenomenon from both the definitive and methodological point of views. As stressed by Throndike, over- and under-achievement should be defined in terms of actual achievement from the predicted achievement, 'predicted upon the basis of the regression equation between aptitude and achievement' (Throndike, 1963, p.13). On the basis of intelligence, the most important predictor of achievement, the over achievement would refer to positive discrepancy and under-achievement to negative discrepancy of the actual achievement from the predicted value.

After 1963, when Throndike clarified the conceptual and methodological phenomenon of over- and under-achievement many a research worker exploring the non-intellectual factors tried to find out the personality characteristics of over- and under-achievers (Rao, 1963; Taylor, 1964; Morrison, 1969; Vanarasi, 1970; Dhaliwal, 1971; Agarwal, 1976).

These studies on discrepant achievement discovered some personality factors like better adjustment, good study habits, emotional stability going with over-achievement and social adjustment, poor study habits and emotional instability with under-achievement. Though these few studies have definitely made a break through in the area, they have completely ignored the possible intra-individual differences in academic achievement.

In all these studies, the investigators have tried to derive over- and under-achievement from the averaged achievement scores of the subjects and not from the scores in individual school subjects — when it is almost an established fact that achievement in different subjects is generally not uniform. An over-achiever in one subject may not be over-achiever in all the other subjects and the same is true about the under-achievers.

Some investigators have empirically observed the intra-individual differences in academic achievement (Blair, 1956; Anastasi, 1958). Their findings give a clear evidence that a high or low achiever in one subject is not a high or low achiever in all other school subjects respectively.

Individual differences among people have long been recognised. The over- and under-achieving students in different school subjects show different dimensions of personality. Ridding (1966) made an investigation on personality variables which were related to over- and under-achievement in English and Arithmetic. His findings showed that over-achievers in English were more dominant and extrovert and in Arithmetic more surgent than the under-achievers. Saxena (1972) found over-achievers in Science more adjusted than the under-achievers. Haq (1987) found over-achievers in Hindi more enthusiastic than under-achievers. In his study the over-achievers in English were found to be more obedient and submissive than the under-achievers. In Mathematics the over-achievers were found to be more relaxed and the under-achievers tense.

Haq (1987) also investigated the sex differences among the students in academic performance and found that the male over-achievers in different subjects

were found to be more intelligent, emotionally stable than the female over-achievers. In English over-achieving boys were found to be more intelligent and emotionally stable than over-achieving girls in the same subject. The female over-achievers in Hindi were found to be more excitable and far more tense while the over-achieving boys in Hindi were emotionally stable and adventurous. In Mathematics and Science, the over-achieving boys showed higher intelligence, greater emotional stability and more adventurousness than the over-achieving girls.

In case of under-achievement almost same differences were found among under-achieving boys and girls in the four knowledge areas.

Thus the over as well as under-achievers in each of the four school subject areas were specifically been found to be having their own personality characteristics set — quite different from the over- and under-achievers of the other school subject areas.

Thus the investigations carried out by Ridding (1966) and Haq (1987) give a clear indication of the intra-individual differences existing in the phenomenon of over- and under-achievers along different subjects.

The present study was taken up for further exploration in the realm of intra-individual differences,

indicated by the findings of the above two studies in the field of over- and under-achievement in specific knowledge areas, here being English and Mathematics.

The main purpose of the present investigation is thus to identify the personality differences between over-achievers and under-achievers within each of the two subjects on one hand and between over-achievers as well as under-achievers across the two subjects, English and Mathematics, respectively.

Against the theoretical background presented in the preceding few paragraphs of this chapter, the present investigation was taken up with the following objectives and hypotheses:

The major objectives of the present investigation would be:

1. To find out the personality differences between the over-achieving groups in different school subjects.

2. To find out the differential personality factors going with over- and under-achievers in different school subjects.

3. To find out the personality factors differentiating the male and female subjects in different knowledge areas both among over- and under-achievers.

Hypotheses

1. The over-achievers in English would be different from the over-achievers in Mathematics in their personality characteristics.

2. The under-achievers in English would also be different from the under-achievers in Mathematics in their personality characteristics.

3. The over- and under-achieving boys in English would differ from the over- and under-achieving boys in Mathematics along their personality characteristics.

4. The over- and under-achieving girls in English would also exhibit personality differences when compared with the over- and under-achieving girls in Mathematics respectively.

5. The male over- and under-achievers would differ from the female over-under achievers in each of the two school subject areas respectively.

Chapter II

REVIEW OF RELATED STUDIES

As already mentioned in the first chapter, the present study was carried out to investigate the distinctive personality characteristics of the under-achievers in English and Mathematics. Some valuable work has certainly been done in the area of over- and under-achievement yet the personality characteristics going with under-achievement in specific subjects have been taken up by only a few investigators. A brief survey of the related studies would perhaps provide a factual base for understanding the present problem.

Studies of Intelligence and Academic Achievement

Intelligence is a major predictor of academic performance. Quite a large number of studies have been carried out to ascertain the extent of relationship between intelligence and academic achievement since the very beginning of the concept of measured intelligence. Some important studies are reviewed here.

McCandless, Roberts and Sterns (1972) studied

intelligence in relation to scholastic achievement. They carried out their investigation on 443 VII grade students and tried to obtain intelligence scores through California Test of Mental Maturity. The correlation between intelligence and academic achievement was found to be .56. From their study it is clear that intelligence is significantly related to academic achievement.

Mehryar and Khajavi (1973) also conducted a valuable investigation on intelligence in relation to scholastic achievement. The Persian form of the EPI and Eysenck's Psychoticism Scale were administered to a large group (23,000) of Iranian secondary school students.

Analysis of results for two randomly selected groups of boys and one group of girls revealed a consistently negative correlation between measures of cognitive performance and psychoticism. A somewhat less consistent but positive correlation was observed for the extraversion scale. There was little correlation between neuroticism and measures of intelligence or achievement.

Chaterji and Mukerji (1974) investigated the achievement through the Differential Aptitude Test Battery Scores. They studied upon 1,042 VIII grade students.

Significant relationship was found at .01 level. The correlation of coefficients ranged from .21 to .49.

Kohli (1976) carried out a study on behavioural and environmental correlates of academic achievement of over- and under-achievers at different levels of intelligence.

The study was conducted on a sample of 264 over-achievers, 276 average and 219 under-achievers. The tools employed were the Raven's Standard Progressive Matrices, the Jalota's Group Test of General Mental Ability, the Mittal's Adjustment Inventory, the Cattell's Jr-Sr High School Personality Questionnaire, the Joshi and Pande's Test of Study Habits and Attitudes, a Projective Test of Achievement Motivation and the Socio-economic Status Scale by Jalota, Pande, Kapoor and Singh.

The major findings were:

1. The spectrum of some of the non-intellectual behaviour-environmental factors was related to academic achievement.
2. Certain factors were common to those groups which differed widely in achievement.

Glossop, Appleyard and Roberts (1979) also conducted a valuable study on intelligence in relation to scholastic achievement. They argued that achievement and accomplishment quotients which were used in

early studies of under-achievement would yield misleading results by over-estimating the number of under-achievers of high IQ and under-estimating those of low IQ in any group of children.

Four indices of achievement relative to a measure of general intelligence were constructed for a sample of 178 adolescents.

Using reliability estimates for two achievement tests, reading comprehension and mathematics and for intelligence test, it was calculated that 69 per cent of the variance in the regression residuals for reading comprehension and 56 per cent in that for Mathematics were independent. Analysis of the relationships between the essay and Mathematics, with intelligence controlled, suggested the involvement of two independent skills.

Crano, Messe and Rice (1979) carried out a study on the predictive validity of mental ability for classroom performance. They conducted their investigation upon 5,200 elementary school children. They used the Standardised Achievement Test Battery and NFER mental ability test to find out achievement and ability scores. The coefficients of correlation was found between .474 to .505.

Nagpal (1979) carried out a study on Non-

intellectual characteristics of over-under achievers. He used Questionnaires of Wig, Nagpal and Kapoor, the students' Personal Problems Index (SPPI) of Wig and Nagpal. Shostrom's Personality Orientation Inventory consisting of 150 two-choice comparative value and behaviour judgement item was used for measuring self-actualisation.

The result shows that the ability measures accounted for a limited proportion of the total variance in academic achievement.

The prevailing academic adjustment was important correlate of over- or under-achievement. Under-achievers reported a greater number of emotional problems. Non-intellectual factors related to acquisition of knowledge resulted in over- or under-achievement. Socio-economic variables related to students determined selection but were not relevant to subsequent academic performance.

Roberge and Flexer (1981) carried out a study on the relationship between intelligence and scholastic achievement. They found that both reading and Mathematics were correlated with intelligence. Mental ability and scholastic performance both were inter-related. The correlation of coefficients in their study was found to be .58 to .61.

Yule, Lansdown and Urbanowiez (1982) carried out an investigation on prediction of educational attainment through intelligence. To measure intelligence they used Wechsler Intelligence Scale for Children (WISC-R) and Neale Analysis of Reading Ability, Vernon Graded Arithmetic Mathematic tests were used to measure achievement of the children.

They carried out their investigation on 160 children and found a high relationship between intelligence and achievement. The correlation between intelligence and academic achievement was found to be .457 to .911.

From the studies discussed above it can clearly be concluded that intelligence is a very reliable predictor of academic achievement. However, it is also borne out that the relationship between the two phenomenon is never perfect or one to one. As such a portion of population always remains unpredicted which is generally dubbed the 'residuals'.

Studies on Personality and Other Non-cognitive Factors in Relation to Academic Achievement

The problems of 'residuals' has very often attracted the attention of the investigators. They have tried to explore the non-cognitive factors which could be responsible for the failure of prediction through

intelligence.

R.D.Savage (1966) conducted a study on 93 school children of both sexes to investigate the relationship between extraversion and neuroticism and the intellectual level and school achievement. The Mental Ability Test, Alpha Form A or Form B (1937) randomly and Eysenck Personality Inventory (1965) were used.

It will be seen that there is a mildly significant relationship between extraversion and IQ (.267) between extraversion and AQ (.235) whilst the extraversion RQ (.191) relation fails to reach the 5 per cent significant level by only .009.

It would appear therefore that high extraversion is related to a brighter intellectual level and higher academic attainment in these children.

The relationship between neuroticism and academic attainment is also of interest in this sample. The neuroticism scores were significantly related to RQ in a negative direction but were not significantly related to intelligence.

Eysenck and Cookson carried out a study on scholastic performance and personality variables. The study was conducted on a large sample of 4,000 eleven years old boys and girls.

They used Moray Houst Test and Schonell General Word Reading Test to measure ability and achievement. The results showed a very close inter-relationship between scholastic performance and personality dimensions.

Rai (1974) also carried out a study on the relationship of anxiety with academic achievement. He conducted investigation upon 1,000 Biology students. Sinha's Anxiety Scale was used to measure anxiety and the examination marks were taken as achievement measure.

The results showed a negative relationship between anxiety and academic achievement, but high levels of anxiety were related to low achievement and low levels of anxiety went with high achievement.

Koul (1978) also carried out an investigation to make a comparison between low and high achievers in Mathematics on a number of Murray's personality needs to see if these needs could be used as possible non-cognitive predictors of achievement in Mathematics. The sample comparised 200 high-achieving students equated on socio-economic status. The tools consisted of Socio-economic Status Scale, Questionnaire of Jalota and others and Hindi version of Edward's Personal Preference Schedule (EPPS).

The major findings of the study were: the high-

achievers in Mathematics differed significantly from low-achievrs on eight of Murray's needs. The low-achievers in Mathematics were more exhibitory succorant, hetrosexual and aggressive. Several Scale of EPPS, discriminated between the high and the low-achievers in Mathematics and could be used as possible non-academic predictors of achievement in Mathematics.

Ruhland, Gold and Feld (1978) carried out a study on motivation and scholastic achievement. They investigated 154 primary level children and found a significant relationship between scholastic performance and motivation.

Vora (1978) investigated the anxiety level of 200 VIII grade students in relation to academic achievement. He used Patel's Reading Ability Test and Test Anxiety Scale to find out ability score and anxiety level. His findings indicated a negative correlation between achievement and anxiety.

Khurshid Mohammad and Fatima Rafat (1984) made a comparative study of personality traits of high- and low achievers. They compared personality traits of 45 low-achievers and 45 high-achievers selected from 408 students in class VII and class VIII of A.B.Inter College, Aligarh. Students were selected on the basis of their final examination grades and were matched with

regard to age, grade level and socio-economic status.

Results of R.B.Cattell's HSPQ reveal that high-achievers and low-achievers differed significantly on 7 personality factors. In comparison to low-achievers, higher achievers were more reserved, intelligent, obedient, conscientious, adventuresome, self-sufficient and self-controlled.

Traub (1984) carried out a study on shyness, depression and anxiety in relation to academic performance. He investigated 187 under-graduates and found shyness positively correlated with depression and anxiety. But in his investigation it was also found that shy people possessed higher achievement mean score than the non-shy pupils.

Kumawat (1985) carried out a study on certain factors related with high- and low-achievement in college students. The investigator administered the Culture Fair Intelligence Test, a concept formation test, an adjustment inventory, a values measure and a self-report job performance measure to 300 high and low achieving male undergraduates in the college of Science and Agriculture Science and Agricultural Engineering at an Indian university. Results show the following:

(a) High achievers in all 3 academic groups had higher intellegence scores.

(b) High achievers in Science and Engineering had better concept formation ability than low achievers.

(c) There were no significant differences between the adjustment scores of high and low achievers in the 3 groups.

(d) High achievers in Science and Agricultural Science had better scientific attitude than low achievers.

(e) There were no significant differences between high and low achievers with regard to contact personality factors in any of the 3 groups.

(f) High achievers had job values related to self-expression and social service while low achievers endorsed the values of profit and social service.

(g) Both high and low achievers' job performance were for administrative and agro-industrial position.

Pal, Jain,Penni and Tiwari (1985) investigated the self concept and level of aspiration in high and low achieving higher secondary pupils. They examined the effect of the personality variables,self-concept and level of aspiration on the scholastic achievement of 240 high school students. The effect of sex and socio-economic status (SES) on level of aspiration was also investigated.

Results of students' scores on Rastigi's Self-Concept Scale and Singh and Tiwari's Level of Aspiration Scale indicate that high achieving students

possessed better self-concepts than did low achievers. Scholastic achievement, sex and SES independently as well as simultaneously were found to significantly affect level of aspiration. Middle SES males displayed the highest levels of aspiration. Males surpassed females in level of aspiration, Middle SES males diaplayed the highest level of aspiration. Males surpassed females in level of aspiration while male and female middle SES students surpassed their same sex high SES counterparts in this variable.

Thus it can be concluded from the findings of the above studies that there is a very close interrelationship between scholastic performance and certain personality dimensions.

The over-achievers in these studies were found to be more intelligent, consientious, self-sufficient and self-controlled.

The under-achievers on the other hand were found to be more warmhearted, assertive, socially group dependent and relaxed.

The results also showed that high level of anxiety was related to low achievement and low level of anxiety went with high achievement.

In case of extraversion-intraversion it was

found that extraversion was related to a brighter intellectual level and higher academic attainment.

Studies on Personality Factors in Relation to Academic Success and Failure, Termed Over- and Under-Achievement.

Some investigations have been done on personality factors influencing on over- and under-achievement, but much of the work has suffered from the definitive misconceptions of the phenomenon.

Some of these studies are presented here to provide a historical background:

Curry (1961) carried out a study to identify over-achievers and under-achievers. By using California Test of Mental Maturity he identified that subjects whose achievement scores were higher than intelligence scores were termed as over-achievers and whose achievement scores were below the intelligence score were termed as under-achievers. His findings showed that greater portion of underachievers came from upper socio-economic group.

Parsley, Powel and Oconmer (1964) attempted to find out sex differences among over- and under-achievers. They studied five different IQ groups of boys and girls by using California Achievement test.

Their findings showed that girls in all groups were

found to be superior than boys in their achievement scores.

Jarvis (1965) carried out a study to find out sex differences in academic achievement. He carried out his study on a large sample of 347 girls and 366 boys. He divided them into three IQ groups -- bright, average and dull. His results also confirmly showed that girls were superior to boys in scholastic achievement at the same age level.

Jaygopal (1974) investigated low high achievers in relation to personality. He used Cattell's HSPQ Test to find out personality factors. Out of 14 factors of Cattell's HSPQ Test only three factors A (warmhearted), E (assertiveness) and I (tender-minded) were associated with high achievement. Only two factors J (circumspect individualism) and H (adventuresomeness) were related to academic achievement in case of low achievers.

The results showed that the higher achievers were reserved, humble and tenderminded whereas under-achievers were zestful and more social.

Tandon (1978) carried out a study on 400 High school failures both male and female. He used Sinha's Anxiety Scale to measure anxiety level of both over- and under-achievers.

The findings showed no significant difference among boys and girls. Both the male and female under-achievers possessed high level of anxiety. It is clear from his study that anxiety is closely related to scholastic underachievement by which he really meant the low achievement.

From these above studies it is clear to us that high achievers exhibit low level of anxiety. They are humbleminded and reserved. The high achieving girls showed superior scholastic achievement. Low achievers possessed high level of anxiety. They were found to be zestful and more social. Low achievement is mainly a problem of male sex.

Studies on Personality Factors in Relation to Over- and Under-Achievement Based on Composite Achievement Scores

Some valuable studies are based on a clear concept of over- and under-achievement. The studies tried to find out the non-intellective personal factors of over-achievers and under-achievers.

Rao (1963) carried out a study on adjustment in relation to academic performance. He predicted the university students' achievement scores through Regression Equation, calculated the positive and negative discrepancies and identified the over- and under-

achievers precisely.

The results showed that over-achievers were more adjusted than the under-achievers. The under achievers were rather poorly adjusted.

Taylor (1964) investigated the relationship between academic achievement and personality traits. From his findings it is clear that over-achievers are more confident, possess high self-esteem, higher power of self-decision and leadership, acceptance of authority, good habit and interest in academic values and are guided by realistic gosls. But in case of under achievers, the investigator found high anxiety, negative self-concepts, poor adjustment, disrespect towards authority and unrealistic goal orientation as their differential characteristics.

Srivastava (1967) carried out an investigation into the factors related to educational under achievement. The stuay was conducted on a sample of 1,837 male pupils studying in class X and class XI of nine secondary and higher secondary schools of Patna.

On the basis of verbal and non-verbal tests of intelligence the data were collected. The data were analysed using product-moment correlation, analysis of variance, 't' test, chi-square and phi coefficient.

Findings indicate that:

(1) Underachievement was related to (a) poor study habits, (b) poor reading ability, (c) low academic motivation, (d) poor health, (e) poor social and emotional adjustment

(2) No significant relationship found to exist between under-achievement and intactness of parental structure, hobbies, interest in games sports and music and attitude towards school.

Morris (1969) carried out a study on under achievement in relation to passive aggression. He employed California Test of Mental Maturity upon 164 boys from a public school. He divided the whole sample into three groups -- over-achievers, achievers and under-achievers.

The findings showed that under-achievers possessed higher passive aggression in relation to other two groups.

Vanarasi (1970) studied 77 pairs of normal and under-achievers and tried to find out relationship of study habits of the two groups. The investigator employed Sinha's Personality Test. The achievement record of annual examination of IX and X classes were also used.

The results showed that over-achievers were significantly superior to under-achievers on study habits.

Bhaduri (1971) investigated some psychological factors of the over- and under-achievers. The investigator used total marks of annual examination as the measure of achievement.

The result showed significant psychological differences between over- and under-achievers. The over-achievers were found less neurotic and less anxious than the under-achievers.

Dhaliwal (1971) carried out a study on some factors contributing to academic success and failure among high school students -- personality correlates of academic over-under achievement.

The study was completed in two phases. The pilot study was carried out on a sample of 441 school students. In the main study a large sample comprising 887 subjects was taken up

Raven's Progressive Matrices and the two forms of Cattell's Culture Fair Intelligence Test (Scale 2) were employed for measuring intelligence. To measure personality, Cattell's fourteen factors of personality was employed.

The results clearly indicate that superior study habits reservedness, higher verbal ability, home emotional and school adjustment, poor social adjustment and security feeling corresponded with over-achievement, whereas inferior study habits, outgoing tendencies, low verbal ability, emotional instability, assertiveness, happy go lucky like temperament, poor adjustment in home, emotional and school areas, good social

adjustment and insecurity feelings were associated with academic under-achievement.

Anxiety and need for achievement bore a curvilinear relationship with the so called over- and under-achievement.

Sharma (1972) carried out a comparative study of adjustment of over- and under-achievers. The study has been carried out in two phases -- preliminary and final studies. The preliminary study was based on a sample of 98 subjects while the main study was on a large sample of 525 subjects of several institutions. Subjects of both the studies were male students of grade VIII of age range from 13 to 15 years.

Mehta's Verbal Intelligence Test and examination marks were used for the study. The major findings were:

(1) The over achievers had better adjustment than the under achievers in the school, home, social and religious and miscellaneous areas.

(2) Intelligence was related to adjustment in all these areas which implied that adjustment was at least partly dependent upon intelligence.

Menon (1972) also investigated the relationship between under achievement and certain personality factors such as social activity, extraversion-introversion, tolerance, certain motivational traits like academic interest, areas of interest like outdoor,

aesthetic, scientific, mechanical and social service.

The sample was made up of 1,245 boys and 1,155 girls. The tools used in the study were: two parallel forms of an intelligence test, General Mental Ability Test - Verbal Form A and B, a personality inventory, a motivational inventory, an interest inventory and a general data questionnaire.

The main findings of the study were: the over-achieving boys and girls were less extrovert and less maladjusted than under achievers and showed greater academic interest and endurance. Over-achieving girls of general ability showed strongest interest in aesthetic social and mechanical activities. The socio-economic status markedly influenced over- and under-achievement, urban residence was related to high achievement.

Passi and Lalithama (1973) carried out a study on self-concept and creativity of over- and under-achievers. The sample was consisted of 117 tenth grade students from Baroda High Schools and divided as over, normal and under achievers. They employed Patel's Intelligence Test and Passi Test of Creativity and Personality Word List.

The results showed that over achievers possessed more creativity than the other two groups. But in

case of self concept, there were no significant differences among the three groups.

Agarwal (1976) investigated some personality factors in relation to academic under-achievement. The investigator employed Cattell's HSPQ test to find out the personality variables.

The results showed that over-achievers possessed these factors: C (emotional stability), G (super ego strength), H (adventuresomensss), Q_2 (self sufficiency), and Q_3 (self control). In case of under-achievers, I, J and Q_4 factors namely tendermindedness, circumspect individualism and tenseness were higher than over-achievers, respectively.

McRae, Loren James (1982) conducted investigation on the relationship between various personality characteristics and academic achievement. The specific purpose was to better understand the underachievers.

The design for this study included theoretical interpretation through Maslow's Personality Syndrom Theory and interviews with randomly selected subjects.

The sample for this study was composed of 187 undergraduates of about an equal number of males and females. The four instruments were administered to the sample. This yielded 34 measures of personality for each subject.

The data analysis indicated that underachievers were more likely than overachievers to be hedonistic socially active, averse to being along, expressive and intimate. Overachievers were conformists while underachievers were more likely than average achievers to be counter-authority. Women over-achievers were aditionally self-disciplined and group active as well as more socially active than men overachievers.

Stockhard and Wood (1984) carried out a study on sex differences in academic under-achievement. They employed California Test of Mental Maturity upon 287 male and 283 female graduate students. The results showed that under-achievement is mainly a problem of male sex than that of female sex.

It has been found from the studies discussed above that over-achievement generally goes with superior study habits, poor social adjustment and security feelings and under-achievement with good social adjustment, insecurity feelings and unrealistic goal orientation.

Studies on Personality Factors in Relation to Over- and Under-Achievement in Specific Knowledge Areas

Under this heading individual's achievement in individual school subjects is taken as the basis for

deriving over- and under-achievement. A few investigators have attempted to study in this field.

Ridding (1966) made an investigation on personality variables which were related to over- and under-achievement in English and Arithmetic. The sample consisted of 600 boys and girls aged 12+ from Manchester schools.

The children completed Forms A & B of Cattell's HSPQ, and Children's Questionnaire adapted from Eysenck's M.P.T, which gives two measures -- Neuroticism and Extraversion.

He classified the sample as over-achievers, under-achievers and average achivers on the basis of prediction through verbal intelligence. The results showed that:

(1) The over-achieving girls showed more neuroticism in English than the over-achieving boys.

(2) The under-achieving girls were more extroverted in Arithmetic than the underachieving boys.

(3) The over-achieving girls were more surgent than the average achievers in English.

(4) The over-achieving girls possessed more conscientiousness than the under-achieving girls in Arithmetic.

(5) The over-achieving boys were more surgent than the average and under-achievers in Arithmetic.

(6) The trait of conscientiousness was associated with over-achievement in Arithmetic.

(7) There was no significant relationship between over- and under-achievement and emotional stability as well as anxiety.

Saxena (1972) carried out a study on adjustment problem of over- and under-achievers. He selected sample randomly from XI grade students of 15 years from Science, Arts and Commerce streams of higher secondary schools at Allahabad.

Mooney's Problem Check List was used to measure adjustment problems. The normal over- and under-achievers were identified by Regression Equation.

The results showed that the under-achievers possessed more adjustment problems than over-achievers in all the streams.

Haq (1987) conducted a valuable study on personality in relation to scholastic achievement. The study was conducted on a large sample of 650 VIII and IX grade school children from Aligarh Muslim University Boys' and Girls' schools.

The investigator employed Cattell and Cattell's 'Culture Fair' test (Scale 2, Form A) for testing intelligence and for the achievement measure the investigator had to depend upon the school records. The Indian adaptation of Cattell and Beloff's HSPQ (Form A)

was employed for measuring personality. The results showed that:

(1) The male over-achievers in Hindi were more prone to be enthusiastic, less excitable and less tough minded than the male under-achievers in Hindi.

(2) The male over-achievers in English were more prone to obedience, submissiveness and accommodating temperament while the under-achievers in the same subject were more inclined to be assertive, competitive and aggressive.

(3) The male over-achievers in Mathematics were found to be relaxed and the under-achievers tense.

(4) In English the over-achieving girls were found to be more assertive, more enthusiastic, more inclined to toughmindedness and more prone to be self-sufficient. The under-achieving girls in English on the other hand, were comparatively less assertive, less enthusiastic and less toughminded but more intelligent, more prone to circumspect individualism and more sociably group dependent.

(5) The female over-achievers in Mathematics were found to be more self-sufficient and ehthusiastic than under-achievers.

(6) Among the girls, over-achievers in Science were more inclined to be reserved and self-sufficient than the under-achievers.

(7) Over-achieving boys in Hindi were found to be more intelligent, emotionally stable, adventurous and individualistic. The over-achieving girls on the other hand were more excitable, more apprehensive and far more tense.

(8) In English over-achieving boys were found to be more intelligent, emotionally stable and obedient while the over-achieving girls were found to be more assertive, self-sufficient and tense.

(9) In Mathematics the over-achieving boys were found to be emotionally stable, enthusiastic and adventurous while the female over-achievers were more apprehensive and self-sufficient.

(10) The over-achieving boys in Science showed higher intelligence, greater emotional stability, more adventurous than the over-achieving girls. The female subjects on the other hand, were more assertive, more apprensive, more self-sufficient and tense.

(11) The under-achieving boys in Hindi were found to be more reserved, emotionally stable, adventurous and tough minded than the under-achieving girls.

(12) In English the under-achieving boys were emotionally more stable, excitable, more assertive, sober, tough minded, apprehensive and socially more dependent than the under-achieving girls.

(13) In Mathematics, the male under achievers were found to be intelligent, emotionally stable, adventurous, tough minded and self-controlled while the female subjects were prone to be assertive and tense.

(14) In Science the male under-achievers were more reserved, emotionally more stable and more tough minded, self-assured and relaxed while the female under-achievers were emotionally less stable, tenderminded and more tense.

There are only a few such studies on over- and under-achievement in specific school subjects. From these studies it can be concluded that over-achievers are more adjusted, more conscientious and more enthusiastic in different school subjects than under-achievers.

Studies on Remedial Measures of Under-Achievement

The problem of under-achievement has now become a burning problem in our educational system. Some studies have been conducted on remedial measures for under-achievement.

Writh (1977) carried out a study on effects of a remedial reading and counselling programme on under-achieveing students. He carried out his study on 190 under-achievers from 3rd and 6th grade students. He divided the sample into two groups -- one was 'treated group' and another was 'control group'.

The investigator used the Intellectual Achievement Responsibility Scale (IARS) for pre- and post-test comparison. The results showed significant differences between the control group and treated group, the differences going in favour of the treated group.

Clark, Ronald Bide (1981) investigated the effects of selected counselling approaches on low achieving grade X students. The purpose of this study was to determine which of the selected approaches of counselling was most effective in terms of improving the self-concept, scholastic achievement, classroom behaviour, attitude towards school and attendance of low achieving grade X students.

Results indicate that:

(1) The low achieving grade X students could be assisted through individual counselling to improve in attitude towards school.

(2) The low-achieving student could be assisted through individual counselling, to improve his attendance at school.

(3) The factors of self-concept, scholastic achievement and classroom behaviour of low-achieving students were affected similarly when the students were counselled either in groups or individually.

Garler, Kinney and Anderson (1985) carried out a study on "effects of counselling on classroom performance". They carried out their study on 41 under-achievers from III and IV grade and this was the treated group. Another group consisted 24 under-achievers and this group was control group.

From their findings, it is clear that the treated group in comparison to control group gains more in classroom behaviour through counselling.

Miller and Dianne (1986) investigated the effect of small group counselling on under-achievers. They studied the effect of small group counselling sessions on 47 IV graders, classified as under-achievers. Students were assigned randomly to a treatment or control group. Treatment students participated in small group sessions twice a week for nine weeks.

Group session consisted of discussion and activities in four areas -- self-appraisal and self-concept, study skills and following directions, listening skills and goal setting.

There was a statistically significant difference only in the mean change scores between the two groups on the *Elementary Guidance Behaviour Rating Scale for* teachers. The results indicate that small group intervention may improve student's classroom behaviour and work habit as judged by teachers.

A perusal of the studies on over- and under-achievement, would, thus reveal that very little work has been done in the area of discrepant achievement ~~in~~ the area of concomitant personality factors of discrepant achievement with reference to specific knowledge areas. The present study is therefore an attempt to explore and identify the personality characteristics going with under-achievement in English and Mathematics only.

The method and procedure of the present investigation is described in the next chapter.

Chapter III

METHOD AND PROCEDURE

As mentioned in the foregoing chapters, the present investigation aimed at finding out the personality characteristics associated with under-achievement in English and Mathematics. The present chapter deals with the methodological and procedural aspects of the investigation.

Tools of the Study

Before embarking upon any research work it has to be ascertained that the tools and measures are reliable and valid. In the present investigation the investigator employed the following standard tools and measures:

(1) The Culture Fair Intelligence Test (Scale 2).

(2) Cattell and Beloff's HSPQ Test (Kapoor and Mehrotra Form A, 1973).

For achievement scores of 302 students in two specific school subjects the investigator had to rely upon the school achievement records.

Measure of Intelligence

The Cattell's Culture Fair Intelligence Test (Scale 2) is designed to find out the most consistent score of basic capacity which many researches have shown to be largely inborn, a relatively constant characteristic of the individuals and operative in quite different areas, e.g., verbal, numerical and social skills. The authors claim that the test is highly suitable for the varied research situations, especially for those in which general ability is the variable to be controlled or experimentally manipulated.

The scale consists of 4 sub-tests which contain 46 problems in all, presented in single-line diagrams involving series, classifications matrices and conditions. The test-wise division of items is 12, 14, 12 and 8 respectively. In the arrangement of the sub-tests, a comparatively well known easy-to-grasp test has been chosen to start the subject off. The first sub-test which has 12 series of items and time allotted for it is 3 minutes. The second sub-test contains 14 items and the time allotted for it is 4 minutes. The third sub-test contains 12 classifications and the allotted time is 3 minutes. The fourth sub-test has 8 items and $2\frac{1}{2}$ minutes are allotted for it.

A brief instruction is given before each sub-test so that the subjects can easily treat them.

Reliability of the Intelligence Measure

The reliability of the test has been evaluated both in terms of the Dependability Coefficient and the Consistency Coefficient. The Dependability Coefficients for the full test were .82 to .85. In split half method Consistency Coefficients were found between .95 to .97 (Technical Suppliment for the Culture Fair Intelligence Test, Scale 2 and Scale 3, 1973, p.2).

Validity of the Intelligence Measure

The validity for the 12 series items of the first sub-test of Culture Fair Intelligence Test is .76. For the second sub-test which consists of 14 items, the coefficient is .54. The coefficient of the third sub-test of 12 matrices is .76 and for fourth sub-test which consists 8 topology, the coefficient is .51. For the whole 46 items, the validity coefficient was found to be .85 (Technical Suppliment, 1973).

In the manual it is also reported that the concrete validity coefficients for four tests of intelligence -- the Wechsler Adult, Revised Beta, Otis Group Test and

Coloured Progressive Matrices -- were found to be .74 for first sub-test, .76 for second sub-test, and .71 for third sub-test. The average coefficient for all these four sub-tests was found to be .70 (Manual, 1973, p.11).

The Measure of Achievement

Due to the non-availability of the standardized achievement tests, the investigator had to depend on the school records of examination marks. The achievement records of one whole year have been taken for this purpose. It would be better if any standardized achievement test could be employed for the school subjects chosen for the study. There was another alternative to construct an achievement test and standardise it. The reliability and validity of the achievement test in such case could have been ensured. The achievement record of the school is not so reliable but due to the non-availability of achievement tests, the investigator had to depend upon school records.

To get better reliability of achievement scores, results of two tests were taken (one half yearly and one annual) in the two selected school subjects, English and Mathematics.

Measure of Personality

To investigate the personality characteristics of the over- and under-achievers, the present investigation employed Indian adaptation of Cattell and Beloff's HSPQ (Kapoor and Mehrotra, Form A, 1973). The author claims that these fourteen measures have been found to cover almost the total personality. It is a comprehensive test of personality consisting of 114 items.

Cattell and Beloff's HSPQ test was found to be suitable for this study at the first place it was suitable for the age group taken for the study and secondly it was easy to administer within a school period.

The 14 factors of personality on the HSPQ are represented by different alphabets. Out of these 14 factors, 10 factors are ranging from A to J and last four are O, Q_2, Q_3 and Q_4. All factors are bipolar. One pole represents low score and another pole represents the high score. The characteristics of each pole are opposed to each other. Given below is the detailed list of personality characteristics in which left pole represents the low score and the right pole represents the high score:

A.	Reserved (Critical, aloof and stiff)	Warmhearted (Outgoing, participating, easy going)
B.	Less intelligent (concrete thinking, low scholastic mental capacity)	More intelligent (abstract thinking, higher mental capacity)
C.	Affected by feeling (easily upset, low ego strength)	Emotionally stable (mature, calm, high ego strength)
D.	Undemonstrative (deliberate, inactive stodgy)	Excitable (impatient, overactive, unrestrained)
E.	Obedient (mild, docile, accommodating)	Assertive (aggressive, competitive, stub bors)
F.	Sober (taciturn, serious)	Enthusiastic (heedless, happy go lucky)
G.	Disregard rules (expedient, weaker super ego strength)	Conscientious (persistent, stronger super ego strength)
H.	Shy (timid, restrained threat sensitive)	Adventurous (thick skinned, socially bold, does not see danger)
I.	Tough-minded (rejects illusion, self-restraint, responsible)	Tender-minded (sensitive, dependent, over protected)
J.	Zestful (likes group action)	Circumspect individualism (reflective, internally restrained)

O.	Self-assured (placid, secure, untroubled)	Apprehensive (self-reproaching, insecure)
Q_2	Socially group dependent (joiner, sound follower)	Self-sufficient (resourceful, prefers own decision)
Q_3	Uncontrolled (follows own urges, careless of social rules)	Controlled (exacting will power, socially precise)
Q_4	Relaxed (tranquil, unfrustrated, composed)	Tense (driven, frustrated fretful)

Reliability of Personality Measure (HSPQ)

To find out the reliability of HSPQ, Form A, the authors have indicated the test-retest agreement for each of the fourteen factors. The reliability coefficient is ranging from .74 to .91 and after six months ranging from .53 to .69 and after one year the reliability coefficient ranging from .38 to .69 (Manual for HSPQ, 1974, p.4).

Validity of Personality Measure (HSPQ)

According to the authors, "what matters crucially is good intensive measurement of the personality factors in the first place and therefore the HSPQ scales are meant to stand or fall by their construct

validity" (Manual for HSPQ, 1973, p.5). Here validity coefficients ranged from .57 to .75. There should be no difficulty in obtaining the reliabilities and validities here indicated, but it should still be observed that at present the HSPQ is apparently systematically better at measuring some factors than others (Manual for HSPQ, p.11).

Population

Three hundred and two students of class X were selected from four girls' and one boys' higher secondary schools of Nagaon, Assam. The ages of the students ranged from 14 to 16 years. The mean of the students' age is 15. The students generally came from middle class from the socio-economic point of view and were studying under the auspices of one and the same educational administrative body, the Secondary Education Board of Assam (SEBA).

Administration of the Test and Collection of Data

The administration of both the tests -- Cattell's Culture Fair Intelligence Test and HSPQ test -- was completed in four days in each school. Instructions given by the author were strictly followed while administering the two tests.

Being a novel experience for the students both the tests proved to be very involving for the subjects. They did the whole task very seriously.

For scoring both the tests, the keys provided by the authors were used. Thus scores on intelligence and fourteen personality factors were obtained. For rendering the intelligence and achievement schores, statistically more comparable, all the intelligence and achievement scores were converted into Z scores (Best,1977,p.238).

Identification of Over- and Under-achievement

The data having thus been collected, the principal task for the investigator was to identify the over- and under-achievers in specific school subjects, namely English and Mathematics. Now there was the problem regarding the prediction of 'the expected achievement', upon which the positive and negative discrepancies, symbolising over- and under-achievement respectively, were to be computed. The terms over-achievement and under-achievement are relevant and meaningful only in comparison with some standard of achievement predicted or expected. For the statistical recognition of over- and under-achievement in each of the two school subjects, the regression equation between intelligence scores and achievement scores as

suggested by Throndike (1963) was used by the investigator. The formula for regression equation was:

$$\bar{y} = r \frac{\sigma y}{\sigma x} (X - M_x) + My$$

In this equation, the factor $r \frac{\sigma y}{\sigma x}$ is called the regression coefficient. When the two variables (i.e., the predictor and the criterion have equal variability (i.e., $\sigma x = \sigma y$), the correlation coefficient, i.e., r is identical with the regression coefficient (cf. Walker and Lev, 1958, p.144). As regards other symbols:

$\bar{y}$ = the predicted value of criterion (achievement).

r = the coefficient of correlation between the predictor (intelligence) and the criterion (achievement) variables.

σy = standard deviation of the criterion scores.

σx = standard deviation of the predictor scores.

X = individual predictor scores.

Y = individual criterion scores.

Mx = mean of the predictor scores.

My = mean of the criterion scores.

(Garrett, 1981, p.158)

The mean and the standard deviations of the predictor and criterion variables were worked out and

the coefficient of correlation between intelligence and achievement scores were found out. Thus the expected achievement scores were found, predicted on the basis of intelligence.

Having obtained the predicted scores, the investigator calculated the discrepancies between the actual achievement scores and predicted values, for each individual in two specific school subjects.

For more precise identification of the over- and under-achievers and to avoid statistical errors, the standard error of estimate was used. One SDe above their predicted score were recognised as over-achievers and one SDe below the predicted level were identified as under-achievers. The formula for standard error of estimate was as follows:

$$SDe = SD\sqrt{1-(r)^2} \qquad \text{(Garrett, 1981, p.161)}$$

Thus following the above procedures, the over- and under-achievers among male and female subjects were recognised in the two specific knowledge areas. Both over-achievers and under-achievers were divided into following 12 groups:

1. Over-achievers in English.
2. Over-achievers in Mathematics.
3. Under-achievers in English.

4. Under-achievers in Mathematics.
5. Male over-achievers in English.
6. Male under-achievers in English.
7. Male over-achievers in Mathematics.
8. Male under-achievers in Mathematics.
9. Female over-achievers in English.
10. Female under-achievers in English.
11. Female over-achievers in Mathematics.
12. Female under-achievers in Mathematics.

Procedure for Determining Group Differences on Fourteen Personality Factors

To find out the differences between the over- as well as under-achievers in each of the two knowledge areas on the fourteen personality factors were tested for significance by the 't'-test. If, on any personality variable, the differences in the mean scores for the groups of over-achievers as well as under-achievers were found to be significant in an ascending or a descending order, then a positive or negative linear relationship was suspected. The formula for 't' value is given below:

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

(McNemar, 1962, p.102)

The results of the present investigation thus obtained, have been presented in the next chapter.

Chapter IV

ANALYSIS OF RESULTS

As stated earlier in the preceding chapters, the main objective of the present investigation is to find out the personality differences between the over- and under-achievers in two major school subjects, namely, English and Mathematics. The data for this study were collected from a sample of 302 students of both the sexes from five schools.

The over- and under-achievers were identified both among boys and girls in each of the two subject areas -- English and Mathematics -- and the following pairs of groups were compared along fourteen personality dimensions on Cattell's H.S.P.Q.:

(1) Over-achievers in English Vs Over-achievers in Mathematics.

Under-achievers in English Vs Under-achievers in Mathematics.

Over-achievers in English Vs Under-achievers in English.

Over-achievers in Mathematics Vs Under-achievers in Mathematics.

(2) -Male Over-achievers in English Vs Male Over-achievers in Mathematics.

Male Under-achievers in English Vs Male Under-achievers in Mathematics.

Male Over-achievers in English Vs Male Under-achievers in English.

Male Over-achievers in Mathematics Vs Male Under-achievers in Mathematics.

(3) Female Over-achievers in English Vs Female Over-achievers in Mathematics.

Female Under-achievers in English Vs Female Under-achievers in Mathematics.

Female Over-achievers in English Vs Female Under-achievers in English.

Female Over-achievers in Mathematics Vs Female Under-achievers in Mathematics.

(4) Male Over-achievers in English Vs Female Over-achievers in English.

Male Over-achievers in Mathematics Vs Female Over-achievers in Mathematics.

Male Under-achievers in English Vs Female Under-achievers in English.

Male Under-achievers in Mathematics Vs Female Under-achievers in Mathematics.

As mentioned in the previous chapter, the study employed the 't' test to find out whether the personality differences between the compared groups were significant or not. The results of the 't' test are presented in tables 1 to 16.

Comparison Between Over-achievers in English and Over-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 1 shows the differences between the over-achievers in English and Mathematics on fourteen personality factors.

As can be seen from Table 1, the over-achievers in the two specific school subjects, differ significantly on eight personality factors, namely Reserved vs Warmhearted (A), Less intelligent vs More intelligent (B), Affected by feeling vs Emotionally stable (C), Sober vs Enthusiastic (F), Disregard rules vs Conscientious (G), Shy vs Adventurous (H), Tough minded vs Tenderminded (I), Sociably group dependent vs Self sufficient (Q_2) and Uncontrolled vs Controlled (Q_3).

On factor A, Reserved vs Warmhearted, the means of the over-achievers in English and Mathematics are 10.87 and 8.17 while the SDs are 3.29 and 2.85 respectively. The 't' value is found to be 5.4 which is highly significant, i.e., at .01 level.

The results clearly show that the over-achievers in Mathematics are more warmhearted than the over-achievers in English.

On factor B, Less intelligent vs More intelligent,

Table 1

Significance of Difference Between the Means of Over-achievers in English and Over-achievers in Mathematics

	Personality Factors	Over-achievers in English (N = 69)		Over-achievers in Maths. (N = 77)		't' value	Level of significance
		Male	SD	Male	SD		
A	Reserved-Warmhearted	8.17	2.85	10.87	3.29	5.4	.01
B	Less intelligent-More intelligent	4.49	2.11	6.55	2.55	5.28	.01
C	Affected by feeling-Emotionally stable	8.90	2.98	8.97	3.14	1.97	.05
D	Undemonstrative-Excitable	8.11	2.84	8.92	2.98	1.68	
E	Obedient-Assertive	5.65	2.37	6.41	2.53	1.90	
F	Sober-Enthusiastic	8.17	2.85	9.35	3.05	2.42	.05
G	Disregards rule-Conscientious	9.97	3.15	11.23	3.35	2.37	.05
H	Shy-Adventurous	8.63	2.93	10.50	3.24	3.67	.01
I	Tough-minded-Tender minded	6.55	2.55	7.84	2.80	2.95	.01
J	Zestful-Circumspect individualism	8.08	2.84	8.11	2.84	0.06	
O	Self assured-Apprehensive	7.11	2.66	8.48	2.91	0.65	
Q_2	Sociably group dependent-Self sufficient	6.17	2.48	7.84	2.80	3.88	.01
Q_3	Uncontrolled-Controlled	11.24	3.35	12.85	3.58	2.82	.01
Q_4	Relaxed-Tense	8.37	2.89	9.05	3.00	1.41	

the means of the over-achieving groups in English and Mathematics, are 6.55 and 4.49 and S.Ds. are 2.55 and 2.11 respectively. The 't' value is found to be 5.28 and it is again significant at .01 level. It clearly shows that the over-achiervers in Mathematics are more intelligent than their counterparts in English.

On factor C, Affected by feeling vs Emotionally stable, the mean scores of the over-achievers in English and Mathematics are 8.9 and 9.87 while the S.Ds. are 2.98 and 3.14 respectively. The 't' value is found to be 1.97 which is significant at .05 level. The high scorers in this factor are emotionally stable while the low scorers affected by feeling.

It can be concluded from the results on factor C, that over-achievers in Mathematics are emotionally more stable than the over-achievers in English.

On factor F, Sober vs Enthusiastic, the high scores represent enthusiastic and low scores sober and calm characteristics. On this personality factor, the mean of the two over-achieving groups in English and Mathematics are 9.35 and 8.17 while the S.Ds. are 3.05 and 2.85 respectively. The 't' value is found to be 2.42 which is significant at .05 level.

It can be concluded from the results shown in

Table 1 that the over-achievers in Mathematics are more inclined to be enthusiastic and happy go lucky while the over-achievers in English are less inclined to the enthusiastic nature.

On factor G, Disregard rules vs Conscientious, the means of the two over-achieving groups of English and Mathematics are 11.23 and 9.97 while the S.Ds. are 3.35 and 3.15 respectively. The 't' value is found to be 2.37 and it is significant at .05 level.

The trend of relationship between over-achievers in English and over-achievers in Mathematics on factor G, Disregard rules vs Conscientious dimension of personality as borne out by the results in Table 1, the over-achievers in Mathematics are tending to be more conscientious while over-achievers in English are less conscientious and disregarding rules.

On factor H, Shy vs Adventurous, the means of the over-achievers in English and Mathematics are 10.50 and 8.63 while the S.Ds. are 3.24 and 2.93 respectively. The 't' value is found to be 3.67 which is highly significant, i.e., at .01 level.

The results thus clearly indicate that the over-achievers in Mathematics are far more adventurous than the over-achievers in English.

On factor I, Tough minded vs Tenderminded, the high scorers are tenderminded and sensitive while the low scorers are tough minded and reject illusions. The means of the over-achievers in English and Mathematics on this factor are 7.84 and 6.55 while the S.Ds. are 2.8 and 2.55 respectively. The 't' value is found to be 2.95 which is significant at .01 level.

The results clearly show that the over-achievers in Mathematics are found to be more tender minded and sensitive than the over-achievers in English.

On factor Q_2, designated as Sociably group dependent vs Self sufficient, the two over-achieving groups significantly differ from each other. The means of the two groups in English and Mathematics are 7.84 and 6.17 while the S.Ds. are 2.8 and 2.48 respectively. The 't' value is found to be 3.88 and it is significant at .01 level.

The results clearly indicate that the over-achievers in Mathematics are more self-sufficient while the over-achievers in English are sociably group dependent.

On factor Q_3, Uncontrolled vs Controlled, the means of the over-achievers in English and over-achievers in Mathematics are 11.24 and 12.85 while the

S.Ds. are 3.58 and 3.35 respectively. The 't' value is found to be 2.82 and it is significant at .01 level.

As such it may be concluded that the over-achievers in Mathematics are more controlled than the over-achievers in English.

On the rest six factors as can be seen from Table 1, the differences between the two groups are insignificant.

The results presented in the Table 1 may be summarised as under:

The over-achievers in English are found to be:

(1) Less warmhearted
(2) Less intelligent
(3) Emotionally less stable
(4) Less enthusiastic
(5) Less conscientious
(6) Less adventurous
(7) Less tenderminded
(8) Sociably group dependent
(9) Less controlled

The over-achievers in Mathematics are found to be:

(1) More warmhearted
(2) More intelligent
(3) Emotionally stable
(4) More enthusiastic
(5) More conscientious

(6) More adventurous
(7) More tenderminded
(8) More self-sufficient
(9) More controlled

Comparison Between Under-achievers in English and Under-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 2 shows the differences between the under-achievers in English and under-achievers in Mathematics on fourteen personality factors. As can be seen from the Table 2, the differences between the two groups are significant on three personality dimensions, namely, Tough minded vs Tenderminded (I), Self-assured vs Apprehensive (O), and Uncontrolled vs Controlled (Q_3).

On factor I, Tough minded vs Tender minded, the high scorers are tendermineded and sensitive. The low scorers on the other hand are tough minded. The mean scores of the under-achieving groups in English and Mathematics are 7.52 and 5.73 while the S.Ds. are 2.74 and 2.39 respectively. The 't' value is found to be 4.97 which is highly significant at .01 level.

The results clearly indicate that the under-achievers in English are tender-minded and sensitive while under-achievers in Mathematics are prone to

Table 2

Significance of Difference Between the Means of Under-achievers in English and Under-achievers in Mathematics

	Personality Factors	Under-achievers in English (N = 106) Male	SD	Under-achievers in Maths. (N = 93 Male	SD	't' value	Level of significance
A	Reserved-Warmhearted	7.85	2.80	7.82	2.79	0.07	
B	Less intelligent-More intelligent	4.32	2.07	4.22	2.05	0.35	
C	Affected by feeling-Emotionally stable	10.63	3.26	9.97	3.15	1.50	
D	Undemonstrative-Excitable	7.91	2.81	7.68	2.77	0.60	
E	Obedient-Assertive	6.66	2.58	6.33	2.51	0.97	
F	Sober-Enthusiastic	9.96	3.15	9.76	3.12	0.46	
G	Disregards rule-Conscientious	8.95	2.99	8.75	2.95	0.48	
H	Shy-Adventurous	9.27	3.04	8.48	2.98	1.92	
I	Tough minded-Tender minded	7.52	2.74	5.73	2.39	4.97	.01
J	Zestful-Circumspect individualism	7.37	2.74	7.09	2.66	0.75	
O	Self assured-Apprehensive	8.60	2.93	7.40	2.72	3.15	.01
Q_2	Sociably group dependent-Self sufficient	6.91	2.62	6.63	2.57	0.77	
Q_3	Uncontrolled-Controlled	9.99	3.16	8.80	2.96	2.83	.01
Q_4	Relaxed-Tense	8.18	2.86	7.82	2.79	0.94	

tough-mindedness.

On factor O, Self assured vs Apprehensive, the mean scores of the two under-achieving groups in English and Mathematics are 8.60 and 7.40 and the S.Ds. are 2.93 and 2.72 respectively. The 't' value is found to be 3.15 which is highly significant at .01 level.

Since the mean score of the under-achievers in English is significantly greater than that of under-achievers in Mathematics, it can be concluded that the under-achievers in English are more apprehensive than the under-achievers in Mathematics.

On factor Q_3, Uncontrolled vs Controlled, the means of the under-achievers in English and Mathematics are 9.99 and 8.80 while the S.Ds. are 3.16 and 2.96 respectively. The 't' value is found to be 2.83 which is significant at .01 level.

The results thus clearly bring out that the under-achievers in English are more controlled while the under-achievers in Mathematics are less controlled.

On the remaining 11 factors, the differences between the under-achievers in English and Mathematics are insignificant.

The results presented in Table 2 may be concluded as under:

The under-achievers in English are:found to be:

(1) More tender minded
(2) More apprehensive
(3) More controlled

The under-achievers in Mathematics are found to be:

(1) Less tender minded
(2) Less apprehensive
(3) Less controlled

Comparison Between Over- and Under-achievers in English on Fourteen Personality Factors (HSPQ)

Table 3 shows the significance of difference between over-achievers in English and under-achievers in English on fourteen personality factors.

As can be seen from Table 3, the over-under achievers in English differ significantly on seven personality factors, namely, Affected by feeling vs emotionally stable (C), Obedient vs Assertive (E), Sober vs Enthusiastic (F), Disregard rules vs Conscientious (G), Tough minded vs Tender minded (I), Self assured vs Apprehensive (O), and Uncontrolled vs Controlled (Q_3).

Table 3

Significance of Difference Between the Means of Over-achievers in English and Under-achievers in English

	Personality Factors	Over-achievers in English (N = 69)		Under-achievers in English (N = 106)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	8.17	2.85	7.85	2.80	0.69	
B	Less intelligent-More intelligent	4.49	2.11	4.32	2.07	0.5	
C	Affected by feeling-Emotionally Stable	8.90	2.98	10.63	3.26	3.39	.01
D	Undemonstrative-Excitable	8.11	2.84	7.91	2.81	0.42	
E	Obedient-Assertive	5.65	2.37	6.66	2.51	2.5	.05
F	Sober-Enthusiastic	8.17	2.85	9.96	3.15	3.58	.01
G	Disregards Rules-Conscientious	9.97	3.15	8.95	2.99	2.04	.05
H	Shy-Adventurous	8.63	2.93	9.27	3.04	1.28	
I	Tough minded-Tender minded	6.55	2.55	7.52	2.74	2.25	.05
J	Zestful-Circumspect individualism	8.08	2.84	7.37	2.74	1.57	
O	Self assured-Apprehensive	7.11	2.66	8.60	2.93	3.10	.01
Q_2	Sociably group depandent-Self sufficient	6.17	2.48	6.91	2.62	1.78	
Q_3	Uncontrolled-Controlled	11.24	3.35	9.99	3.16	2.40	.05
Q_4	Relaxed-Tense	8.37	2.89	8.18	2.86	0.40	

On factor C, Affected by feeling vs emotionally stable, the means of the over-achievers in English and underachievers in English are 8.9 and 10.63 while the S.Ds. are 2.98 and 3.26 respectively. The 't' value is found to be 3.39 which is significant at .01 level.

The results thus reveal that the over-achievers in English are emotionally less stable while the under-achievers in the same subject are emotionally more stable.

Factor E, on which high scorers are counted as more assertive and low scorers less assertive, obedient and submissive, the over-achievers in English have lower mean scores than the under-achievers in English. Their mean scores are 5.65 and 6.66 while the S.Ds. are 2.37 and 2.51 respectively. The 't' value is found to be 2.5 which is significant at .05 level.

The results thus clearly indicate that the over-achievers in English are obedient while the under-achievers in English are prone to be assertive and dominant.

On factor F, Sober vs Enthusiastic, the means of the two groups are 8.17 and 9.96 and S.Ds. are 2.85 and 3.15 respectively. The 't' value is found to be

3.58 which is significant at .01 level.

The results thus evidently bring out that the under-achievers with their high mean score in English are more enthusiastic while the over-achievers in English are less enthusiastic.

On factor G, Disregard rules vs Conscientious, the means of the both over- and under-achieving groups in English are 9.97 and 8.95 while the S.Ds. are 3.15 and 2.99 respectively. The 't' value is found to be 2.04 and it is significant at .05 level.

The results indicate a trend of positive linear relationship between over-under achievement. The over-achievers show significantly greater ability of conscientiousness than the under-achievers in English.

On factor I, Tough-minded vs Tender-minded, the means of the over-under achieving groups in English are 6.55 and 7.52 and S.Ds. are 2.55 and 2.74 respectively. The 't' value is found to be 2.25 which is significant at .05 level.

The results on this personality dimension thus clearly indicate that the under-achievers in English with their high mean score are more tender-minded than the over-achievers in English.

Comparison between over- and under-achieving

groups in English on factor O, Self-assured vs Apprehensive also shows significant difference between the two groups. The mean scores of the groups are 7.11 and 8.60 and S.Ds. are 2.66 and 2.93 respectively. The 't' value is found to be 3.10 which is significant at .01 level.

As such it may be concluded that the over-achievers in English on this factor are less apprehensive while the under-achievers are more apprehensive.

On factor Q_3, Uncontrolled vs Controlled, the means of the over-achievers in English and under-achievers in the same subject are 11.24 and 9.99 while the S.Ds. are 3.35 and 3.16 respectively. The 't' value is found to be 2.40 which is significant at .05 level.

The results on this factor clearly indicate that over-achievers in English are more controlled while the under-achievers in the same subject are found to be less controlled.

On the rest seven factors the differences between over- and under-achievers in English are insignificant.

The findings shown in Table 3 are summarised as follows:

The over-achievers in English are found to be:

(1) Emotionally less stable.
(2) Obedient and submissive.
(3) Less enthusiastic and less happy go lucky.
(4) More conscientious.
(5) Less tenderminded.
(6) Less apprehensive.
(7) More controlled.

The under-achievers in English are found to be:

(1) Emotionally stable.
(2) Prone to be assertive and dominant.
(3) More enthusiastic and happy go lucky.
(4) Less conscientious.
(5) More tenderminded.
(6) More apprehensive.
(7) Less controlled.

Comparison Between Over- and Under-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 4 shows the significance of difference between over- and under-achievers in Mathematics on fourteen personality factors. As can be seen from Table 4, the over-achievers in Mathematics differ significantly from under-achievers in the same subject on eleven personality factors, namely, Reserved vs Warm-hearted (A), Less intelligent vs More intelligent (B), Undemonstrative vs Excitable (D), Disregard

Table 4

Significance of Difference Between the Means of Over-achievers in Mathematics and Under-achievers in Mathematics

	Personality Factors	Over-achievers in Maths. (N = 77)		Under-achievers in Maths. (N = 99)		't' value	Level of Significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	10.87	3.29	7.83	2.99	6.35	.01
B	Less intelligent-More intelligent	6.55	2.55	4.22	2.05	6.33	.01
C	Affected by feeling-Emotionally stable	9.87	3.14	9.97	3.15	0.20	
D	Undemonstrative-Excitable	8.92	2.98	7.68	2.77	2.81	.01
E	Obedient-Assertive	6.41	2.53	6.33	2.51	0.2	
F	Sober-Enthusiastic	9.35	3.05	9.76	3.12	0.85	
G	Disregards Rules-Conscientious	11.23	3.35	8.75	2.95	4.92	.01
H	Shy-Adventurous	10.50	3.24	8.48	2.91	4.29	.01
I	Tough minded-Tender minded	7.84	2.80	5.73	2.39	5.17	.01
J	Zestful-Circumspect individualism	8.11	2.84	7.09	2.66	2.37	.05
0	Self assured-Apprehensive	8.48	2.91	7.40	2.72	2.51	.05
Q_2	Sociably group dependent-Self-sufficient	8.84	2.80	6.63	2.57	2.88	.01
Q_3	Uncontrolled-Controlled	12.85	3.58	8.80	2.96	7.94	.01
Q_4	Relaxed-Tense	9.05	3.00	7.82	2.79	2.73	.01

rules vs Conscientious (G), Shy vs Adventurous (H), Tough minded vs Tender minded (I), Zestful vs Circumspect Individualism (J), Self assured vs Apprehensive (O), Sociably group dependent vs Self-sufficient (Q_2), Unctontrolled vs Controlled (Q_3), and Relaxed vs Tense (Q_4).

On factor A, Reserved vs Warm-hearted, the mean scores of over- and under-achieving groups in Mathematics are 10.87 and 7.83 while the S.Ds. are 3.29 and 2.99 respectively. The 't' value is found to be 6.35 which is highly significant at .01 level.

It can be concluded from the results on this factor, that the over-achievers in Mathematics with their significantly higher mean score are far more warm-hearted than their under-achieving counterparts.

On factor B, Less intelligent vs More intelligent, the means of the both over- and under-achieving groups in Mathematics are 6.55 and 4.22 and the S.Ds. are 2.55 and 2.05 respectively. The 't' value is found to be 6.33 which is again highly significant at .01 level.

The results clearly indicate that on factor B, the over-achievers in Mathematics with their higher mean score are more intelligent while the under-achievers are less intelligent.

Comparison between over- and under-achievers in Mathematics on factor D, designated as Undemonstrative vs Excitable also shows significant difference between the two groups. The means of both over- and under-achievers in Mathematics are 8.92 and 7.68 while the S.Ds.are 2.98 and 2.77 respectively. The 't' value is found to be 2.81 which is highly significant at .01 level.

The results clearly indicate that the over-achievers in Mathematics are more excitable while the under-achievers in the same subject are less excitable.

On factor G, Disregard rules vs Conscientious, the means of the two groups are 11.23 and 8.75 while the S.Ds. are 3.35 and 2.95 respectively. The 't' value is found to be 4.92 which is once again significant at .01 level.

It can be concluded from the above results that the over-achievers in Mathematics are more conscientious while the under-achievers are less conscientious and disregard rules.

On factor H, Shy vs Adventurous, the high scores represent adventurous and the low scores represent shy nature. On this personality factor the mean scores of the over-achievers and under-achievers in Mathematics are 10.50 and 8.48 while the S.Ds. are

3.24 and 2.91 respectively. The 't' value is found to be 4.29 which is highly significant at .01 level.

The results thus clearly bring forth that on factor H, the over-achievers in Mathematics with their significantly higher mean score are far more adventurous than the under-achievers in the same subject.

On factor I, Tough minded vs Tender minded, the mean scores of the over- and under-achieving groups in Mathematics are 7.84 and 5.73 and S.Ds.are 2.80 and 2.39 respectively. The 't' value is found to be 5.17 which is again highly significant.

The results thus clearly bring out that the over-achievers in Mathematics are more inclined to tender mindedness while the under-achievers in Mathematics can be described as more inclined to tough mindedness.

The comparison between over- and under-achievers in Mathematics on factor J, designated as Zestful vs Circumspect individualism, shows the significant difference between the two groups. The mean scores of both the groups are 8.11 and 7.09 while the S.Ds. are 2.48 and 2.66 respectively. The 't' value is found to be 2.37 and it is significant at .05 level.

The results in this particular personality dimension clearly indicate that the over-achievers in Mathematics are more prone to circumspect individualism

while the under-achievers in Mathematics are less prone to circumspect individualism and internally restrained temperament.

On factor O, Self-assured vs Apprehensive, the means of the over- and under-achieving groups in Mathematics are 8.84 and 7.40 and S.Ds.are 2.91 and 2.72 respectively. The't" value is found to be 2.51 which is significant at .05 level.

It can be concluded therefore that the over-achievers in Mathematics are more apprehensive while the under-achievers in the same subject are less apprehensive.

On factor Q_2, Sociably group dependent vs Self-sufficient, the means of over- and under-achievers in Mathematics are 7.84 and 6.63 and S.Ds. are 2.80 and 2.57 respectively. The 't' value which is significant at .01 level is found to be 2.88.

The results thus clearly show that the over-achievers in Mathematics with their higher mean score are more prone to be self-sufficient, reflective and prefering own decisions while the under-achievers in Mathematics are less prone to self-sufficiency.

On factor Q_3, Uncontrolled vs Controlled, the means of the over- and under-achievers in Mathematics

are 12.85 and 8.80 and S.Ds. are 3.58 and 2.96 respectively. The 't' value is found to be 7.94 which is highly significant at .01 level.

As can be seen from the results of this particular personality factor, the over-achievers in Mathematics with their high mean score are more controlled than the under-achievers with their low mean score.

On factor Q_4, Relaxed vs Tense, the high scores represent more tense temperament and low scores relaxed and tension free. On this personality dimension, the mean scores of the over- and under-achieving groups in Mathematics are 9.05 and 7.82 and S.Ds. are 3.00 and 2.79 respectively. The 't' value is again highly significant at .01 level.

The results clearly give evidence that the over-achievers in Mathematics are more tense while the under-achievers in the same subject are comparatively less tense.

The results presented in Table 4 thus reveal that over-achievers in Mathematics are:

(1) More warmhearted
(2) More intelligent
(3) More excitable
(4) More conscientious
(5) More adventurous

(6) More inclined to tender-mindedness
(7) More prone to circumspect individualism
(8) More apprehensive
(9) More prone to be self-sufficient and resourceful
(10) More controlled
(11) More tense

The under-achievers in Mathematics are found to be:

(1) Less warm hearted
(2) Less intelligent
(3) Less excitable
(4) Less conscientious
(5) Less adventurous
(6) More prone to tough mindedness
(7) Less prone to circumspect individualism
(8) Less apprehensive
(9) Less prone to be self-sufficient
(10) Less controlled
(11) Less tense

On the rest three factors as can be seen from Table 4, the differences between the two groups are insignificant.

Besides the above mentioned over all comparison between the over-achievers of the two subjects as well as the under-achievers in two subjects, and within the subject, between over- and under-achievers, comparisons were also made on the basis of sex, that is, within the same sex area and between the two sexes

both for the over- and under-achievers in English and Mathematics.

Comparison Between Male Over-achievers in English and Male Over-achievers in Mathematics on Fourteen Personality Factors(HSPQ)

As stated earlier in the preceding chapters, one major objective of this investigation is to find out the differences among over-achieving groups in English and Mathematics on fourteen personality dimensions.

Table 5 shows the significance of differences between over-achievers in English and over-achievers in Mathematics on fourteen personality dimensions.

As revealed by the results shown in Table 5, the male over-achievers in English differ from male over-achievers in Mathematics on factors, Reserved vs Warmhearted (A), Sober vs Enthusiastic (F), and Relaxed vs Tense (Q_4).

On factor A, Reserved vs Warmhearted, the means of the over-achieving groups in English and Mathematics are 7.13 and 8.95 while the S.Ds. are 2.67 and 2.95 respectively. The 't' value is found to be 1.99 which is significant at .05 level.

The results thus indicate that the over-achievers

Table 5

Significance of Difference Between the Means of Male Over-achievers in English and Male Over-achievers in Mathematics

	Personality Factors	Male Over-achievers in English (N = 15)		Male Over-achievers in Maths. (N = 20)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	7.13	2.67	8.95	2.95	1.99	.05
B	Less intelligent-More intelligent	4.33	2.08	3.85	1.96	0.68	
C	Affected by feeling-Emotionally stable	10.00	3.16	9.95	3.15	0.04	
D	Undemonstrative-Excitable	6.26	2.50	6.95	2.63	0.77	
E	Obedient-Assertive	5.13	2.26	5.75	2.39	0.93	
F	Sober-Enthusiastic	8.8	2.96	11.15	3.32	2.21	.05
G	Disregards Rules-Conscientious	8.93	2.98	8.80	2.96	0.125	
H	Shy-Adventurous	7.86	2.80	8.10	2.84	0.24	
I	Tough minded-Tender minded	6.80	2.60	6.70	2.58	0.10	
J	Zestful-Circumspect individualism	6.86	2.62	6.60	2.56	0.28	
O	Self assured-Apprehensive	6.80	2.60	6.05	2.45	0.85	
Q_2	Sociably group dependent-Self sufficient	6.73	2.59	6.75	2.59	0.02	
Q_3	Uncontrolled-Controlled	9.60	3.09	9.98	3.14	0.27	
Q_4	Relaxed-Tense	6.02	2.50	7.89	2.75	2.25	.05

in Mathematics are of more warmhearted, outgoing, easy going and participating characteristics than the over-achievers in English.

On factor F, Sober vs Enthusiastic, the high scores represent enthusiastic and happy go lucky and the low scores less enthusiastic and sober type of temperament. On this personality dimension the means of male over-achievers in English and Mathematics are 8.8 and 11.15 and the S.Ds.are 2.96 and 3.32 respectively. The 't' value is found to be 2.21 which is significant again at .05 level.

Since the mean score of the over-achievers in Mathematics is significantly greater than that of over-achievers in English, it is concluded that the male over-achievers in Mathematics are more enthusiastic while the over-achievers in English are less enthusiastic.

On factor Q_4, Relaxed vs Tense, the means of the over-achieving groups in English and Mathematics are 6.02 and 7.89 while the S.Ds. are 2.50 and 2.75 respectively. The 't' value which is significant at .05 level is found to be 2.25.

The results once again indicate that the male over-achievers in Mathematics with their high mean score are more tense while the male over-achievers in

English are less tense.

On the rest eleven factors the differences between male over-achievers in English and Mathematics are insignificant.

The results shown in Table 5 may be concluded as under:

The over-achievers in English are found to be:

(1) Less warmhearted
(2) Less enthusiastic
(3) Less tense

The over-achievers in Mathematics are found to be:

(1) More warmhearted, outgoing and easy going
(2) More enthusiastic, happy go lucky
(3) More tense

Comparison Between Male Under-achievers in English and Mathematics on Fourteen Personality Factors (HSPQ)

Table 6 shows the differences between male under-achievers in English and male under-achievers in Mathematics on fourteen personality factors. The differences between the two groups are significant on three personality dimensions, namely Reserved vs Warmhearted (A), Zestful vs Circumspect individualism (J) and Uncontrolled vs Controlled (Q_3).

Table 6

Significance of Difference Between the Means of Male Under-achievers in English and Male Under-achievers in Mathematics

	Personality Factors	Male Under-achievers in English (N = 72)		Male Under-achievers in Maths. (N = 72)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	7.04	2.65	8.98	2.96	4.31	.01
B	Less intelligent-More intelligent	4.16	2.03	3.81	1.95	0.63	
C	Affected by feeling-Emotionally stable	10.20	3.19	10.37	3.22	0.22	
D	Undemonstrative-Excitable	7.38	2.71	7.55	2.74	0.38	
E	Obedient-Assertive	6.95	2.63	6.45	2.53	1.21	
F	Sober-Enthusiastic	10.30	3.20	10.22	3.19	0.71	
G	Disregards rules-Conscientious	5.75	2.39	5.90	2.42	0.37	
H	Shy-Adventurous	8.69	2.94	8.86	2.97	0.35	
I	Tough minded-Tender minded	7.11	2.66	7.08	2.66	0.07	
J	Zestful-Circumspect individualism	7.02	2.64	4.59	2.14	6.39	.01
O	Self assured-Apprehensive	7.18	2.67	6.63	2.57	1.30	
Q_2	Sociably group dependent-Self-sufficient	6.62	2.57	6.59	2.56	0.07	
Q_3	Uncontrolled-Controlled	9.04	3.00	7.65	2.76	3.02	.01
Q_4	Relaxed-Tense	8.15	2.85	7.77	2.78	0.84	

On factor A, Reserved vs Warmhearted, the means of the male underachieving groups in English and Mathematics are 7.04 and 8.98 while the S.Ds. are 2.65 and 2.96 respectively. The 't' value is found to be 4.31 which is significant at .01 level.

It can be concluded therefore, that the male under-achievers in Mathematics with their higher mean score tend to be more warmhearted, out going, easy going and of participating nature. The mean score of the under-achievers in English being significantly lower, they are prone to be less warmhearted.

On factor J, Zestful vs Circumspect individualism, the high scorers are more individualistic, reflective and internally restrained and low scorers are more zestful.

The means of the under-achieving boys in English and Mathematics, as can be seen from Table 6, are 7.02 and 4.59 and S.Ds. are 2.64 and 2.14 respectively. The 't' value is found to be 6.39 and it is highly significant at .01 level.

The results clearly bring out that the under-achievers in English are more prone to circumspect individualism, reflecting and internally restrained nature while the under-achievers in Mathematics are more zestful.

On factor Q_3, Uncontrolled vs Controlled, the means of the both under-achieving groups in English and Mathematics are 9.04 and 7.65 while the S.Ds. are 3.00 and 2.76 respectively. The 't' value is found to be 3.02 which is again significant at .01 level.

It can be concluded from the results shown in Table 6 that the male under-achievers in English are more controlled and male under-achievers in Mathematics are less controlled.

On the rest eleven factors, the differences between the two under-achieving groups in Mathematics are insignificant.

The findings shown in Table 6 may be summarised as under:

The male under-achievers in English are found to be:

(1) Less warmhearted
(2) More prone to circumspect individualism, reflective and internally restrained nature
(3) More controlled

The male under-achievers in Mathematics are found to be:

(1) More warmhearted and easy going
(2) More zestful
(3) Less controlled

Comparison Between Male Over- and Under-Achievers in English on Fourteen Personality Factors (HSPQ)

Table 7 shows the differences between male over- and under-achievers in English on fourteen personality dimensions.

As seen from the Table 7, male overachievers in English differ significantly from male under-achievers in English on three personality dimensions, namely, Obedient vs Assertive (E), Sober vs Enthusiastic (F), Disregards Rules vs Conscientious (G).

On factor E, Obedient vs Assertive, the means of the male over- and under-achievers in English are 5.13 and 6.95 while the S.Ds. are 2.26 and 2.63 respectively. The 't' value is found to be 2.8 and it is significant at .01 level.

Since the mean score of the over-achievers in English is significantly lower than that of under-achievers in English, it can be concluded that the male over-achievers in English are prone to be of obedient, temperament while the under-achievers in English are prone to be assertive.

The comparison between over- and under-achieving boys in English on factor F, Sober vs Enthusiastic shows significant difference between the two groups. The means of the over- and under-achieving boys in

Table 7

Significance of Difference Between the Means of Male Over-achievers in English and Male Under-achievers in English

	Personality Factors	Male Over-achievers in English (N = 15)		Male Under-achievers in English (N = 72)		't' value	Level significance
		Mean	SD	Mean	SD		
A	Reserved-warmhearted	7.13	2.67	7.04	2.65	0.21	
B	Less intelligent-More intelligent	4.33	2.08	4.16	2.03	0.29	
C	Affected by feeling-Emotionally stable	10.00	3.16	10.20	3.19	0.02	
D	Undemonstrative-Excitable	6.26	2.50	7.38	2.71	1.57	
E	Obedient-Assertive	5.13	2.26	6.95	2.63	2.80	.01
F	Sober-Enthusiastic	8.80	2.96	10.30	3.20	1.78	.05
G	Disregards rules-Conscientious	8.93	2.98	5.75	2.39	3.92	.01
H	Shy-Adventurous	7.86	2.80	8.69	2.94	1.03	
I	Tough minded-Tenderminded	6.80	2.60	7.11	2.66	0.42	
J	Zestful-Circumspect individualism	6.86	2.62	7.02	2.64	0.23	
O	Self-assured-Apprehensive	6.80	2.60	7.18	2.67	0.52	
Q_2	Sociably group dependent-Self-sufficient	6.73	2.59	6.62	2.57	0.14	
Q_3	Uncontrolled-Controlled	9.60	3.09	9.04	3.00	0.62	
Q_4	Relaxed-Tense	7.26	2.69	8.15	2.85	1.17	

English are 8.8 and 10.30 while the S.Ds. are 2.96 and 3.20 respectively. The 't' value is found to be 1.78 which is significant at .05 level.

Thus it can be inferred from the results that the male over-achievers in English with their low mean score are prone to be less enthusiastic and male under-achievers with their high mean score prone to be more enthusiastic and happy go lucky.

On factor G, Disregards rules vs Conscientious, the means of the over-under achieving boys in English are 8.93 and 5.75 and the S.Ds. are 2.98 and 2.39 respectively. The 't' value which is highly significant at .01 level is found to be 3.92.

The results thus clearly indicate that the over-achievers in English are more conscientious while the under-achievers are prone to be disregarding rules and neglecting the bindings.

On the rest eleven factors the differences between over- and under-achieving boys in English are insignificant.

The findings shown on Table 7 may be concluded as follows:

The over-achieving boys in English are found to be:

(1) Less assertive, less dominant and less aggressive.

(2) Less enthusiastic
(3) More conscientious

The under-achievers are found to be:

(1) More assertive and aggressive
(2) More enthusiastic and happy go lucky
(3) Less conscientious and disliking rules

Comparison Between Male Over- and Under-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 8 shows the differences between male over-achievers in Mathematics and male under-achievers in Mathematics, on fourteen personality factors. The differences between the two groups are significant on three personality factors, namely, Disregard rules vs Conscientious (G), Zestful vs Circumspect individualism (J) and Uncontrolled vs Controlled (Q_3).

On factor G, Disregard rules vs Conscientious the high scores represent conscientiousness and low scores a disregard for rules. The means of the over- and under-achieving boys in Mathematics are 8.8 and 5.90 and S.Ds. are 2.96 and 2.42 respectively. The 't' value is found to be 3.97 which is highly significant at .01 level.

The results thus give a clear evidence that the over-achieving boys in Mathematics are conscientious

Table 8

Significance of Difference Between the Means of Male Over-achievers in Mathematics and Male Under-achievers in Mathematics

	Personality factors	Male Over-achievers in Maths. (N = 20)		Male Under-achievers in Maths. (N = 72)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	7.08	2.06	7.05	2.05	0.50	
B	Less intelligent-More intelligent	3.85	1.96	3.81	1.95	0.07	
C	Affected by feeling-Emotionally stable	9.95	3.15	10.37	3.22	0.47	
D	Undemonstrative-Excitable	6.95	2.63	7.55	2.74	1.01	
E	Obedient-Assertive	5.75	2.39	6.45	2.53	1.04	
F	Sober-Enthusiastic	9.15	3.02	10.22	3.19	1.40	
G	Disregard rules-Conscientious	8.80	2.96	5.90	2.42	3.97	.01
H	Shy-Adventurous	8.10	2.84	8.86	2.97	1.04	
I	Tough minded-Tender minded	6.70	2.58	7.08	2.66	0.57	
J	Zestful-Circumspect individualism	6.60	2.56	4.59	2.14	3.19	.01
O	Self assured-Apprehensive	6.05	2.45	6.63	2.57	0.92	
Q_2	Sociably group dependent-Self sufficient	6.75	2.59	6.59	2.56	0.24	
Q_3	Uncontrolled-Controlled	9.90	3.14	7.65	2.76	2.88	.01
Q_4	Relaxed-Tense	7.50	2.73	7.77	2.78	.38	

and the under-achievers in the same subject disregard rules.

On factor J, Zestful vs Circumspect individualism, the mean scores of both the over- and under-achieving groups in Mathematics are 6.6 and 4.59 while the S.Ds. are 2.56 and 2.14 respectively. The 't' value is found to be 3.19 which is again highly significant at .01 level.

From results on this particular factor, it can be concluded that the over-achievers in Mathematics are characterised by circumspect individualism, reflectiveness and internally restrained temperatment. The under-achievers are markedly zestful and internally less restrained.

On factor Q_3, Uncontrolled vs Controlled, the means of the over- and under-achieving boys in Mathematics are 9.9 and 7.65, the S.Ds. are 3.14 and 2.76 respectively. The 't' value is found to be 2.88 which is significant at .01 level.

The results clearly indicate that the over-achievers in Mathematics with their higher mean score tend to be more controlled and under-achievers in the same subject tend to be less controlled.

On the remaining eleven factors, the differences between both over- and under-achieving boys in

Mathematics are insignificant.

It can, thus be concluded from the results shown in Table 8 that the over-achieving boys in Mathematics are:

(1) More conscientious
(2) More prone to circumspect individualism
(3) More controlled

The under-achieving boys are found to be:

(1) Disregarding rules
(2) More zestful
(3) Less controlled

Comparison Between Female Over-achievers in English and Female Over-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 9 shows the significance of difference between over-achieving girls in English and Mathematics on fourteen personality factors. As can be seen from Table 9, the differences between the two female over-achieving groups are significant on three personality factors, namely, Reserved vs Warmhearted (A), Uncontrolled vs Controlled (Q_3) and Relaxed vs Tense (Q_4).

On factor A, Reserved vs Warmhearted, the high scorers are more warmhearted, out going, easy going and of participating characteristics. The low scorers

Table 9

Significance of Difference Between the Means of Female Over-achievers in English and Female Over-achievers in Mathematics

	Personality Factors	Female Over-achievers in English (N = 54)		Female Over-achievers in Maths. (N = 57)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	8.22	2.86	9.38	3.05	2.10	.05
B	Less intelligent-More intelligent	4.35	2.08	5.03	2.42	1.61	
C	Affected by feeling-Emotionally stable	8.87	2.97	8.70	2.94	0.30	
D	Undemonstrative-Excitable	8.74	2.95	8.33	2.88	0.75	
E	Obedient-Assertive	6.12	2.47	5.96	2.44	0.35	
F	Sober-Enthusiastic	8.51	2.91	7.87	2.87	1.20	
G	Disregard rules-Conscientious	10.16	3.18	10.73	3.27	0.95	
H	Shy-Adventurous	9.12	3.01	8.35	2.88	1.42	
I	Tough minded-Tender minded	6.62	2.57	7.47	2.73	1.70	
J	Zestful-Circumspect individualism	8.20	2.86	7.82	2.79	0.73	
O	Self assured-Apprehensive	7.64	2.76	8.05	2.83	0.78	
Q_2	Sociably group dependent-Self sufficient	7.03	2.65	7.49	2.73	0.92	
Q_3	Uncontrolled-Controlled	10.00	3.16	11.35	3.30	2.25	.05
Q_4	Relaxed-Tense	8.22	2.88	9.66	3.10	2.61	.01

on the other hand, are more reserved, aloof, critical and stiff in temperament.

The means of the over-achieving girls in English and Mathematics are 8.22 and 9.38 while the S.Ds. are 2.86 and 3.05 respectively. The 't' value is found to be 2.10 and it is significant at .05 level.

The results thus indicate that the over-achieving girls in Mathematics are warmhearted, easy going, out going and of participating characteristics. On the other hand, the female over-achievers in English are more reserved, aloof,critical and stiff in temperament.

On factor Q_3, Uncontrolled vs Controlled, the means of both female over-achieving groups in English and Mathematics are 10.00 and 9.66 and the S.Ds.are 3.16 and 3.30 respectively. The 't' value is found to be 2.25 which is moderately significant at .05 level.

It can be concluded, therefore, that the over-achieving girls in English are less controlled while the over-achieving girls in Mathematics are more controlled.

The comparison between both female over-achieving groups in English and Mathematics on Q_4 designated as Relaxed vs Tense also shows significant difference

between the two groups. The means of the over-achieving girls in English and Mathematics are 8.22 and 9.66 while the S.Ds. are 2.88 and 3.10 respectively. The 't' value is found to be 2.61 which is significant at .01 level.

The results thus give a clear indication that the female over-achievers in English are far less tense than the over-achievers in Mathematics, the latter thus being more tense, frustrated and fretful.

On the rest eleven factors the differences between the over-achieving girls in English and Mathematics are not significant.

The results presented in Table 9 thus reveal that the over-achieving girls in English are:

(1) Less warm hearted
(2) Less controlled
(3) Less frustrated, less tense

The over-achieving girls in Mathematics are:

(1) More warmhearted, easy going and of participating characteristics
(2) More controlled
(3) More tense, frustrated and fretful

Comparison Between Female Under-achievers in English and Mathematics on Fourteen Personality Factors (HSPQ)

Table 10 shows the significance of differences between the female under-achieving groups in English and Mathematics on fourteen personality dimensions. As can be seen from Table 10 the female under-achieving groups in English and M athematics differ significantly on two personality dimensions, namely, Sober vs Enthusiastic (F), and Tough minded vs Tender minded.

On factor F, Sober vs Enthusiastic the mean scores of both female under-achieving groups in English and Mathematics are 8.88 and 5.90 and the S.Ds. are 2.97 and 2.42 respectively. The 't' value is found to be 4.08 which is highly significant at .01 level.

It can, therefore, be concluded from the results that the female under-achievers in English are enthusiastic while the female under-achievers in Mathematics are sober.

On factor I, Tough minded vs Tender-minded the means of the two female under-achieving groups in English and Mathematics are 5.12 and 8.09 while the S.Ds. are 2.29 and 2.84 respectively. The 't' value is found to be 4.12 which is again significant at .01 level.

Table 10

Significance of Difference Between the Means of Female Under-achievers in English and Female Under-achievers in Mathematics

	Personality factors	Female Under-achievers in English (N = 34)		Female Under-achievers in Maths (N = 21)		't' value	Level of significance
		Mean	SD	Mean	SD		
	Reserved-Warmhearted	9.52	3.08	10.38	3.22	1.08	
	Less intelligent-More intelligent	5.00	2.23	5.38	2.31	0.66	
	Affected by feeling-Emotionally stable	8.55	2.92	8.23	2.86	0.40	
	Undemonstrative-Excitable	8.82	2.96	8.61	2.93	0.25	
	Obedient-Assertive	6.14	2.47	5.91	2.42	0.34	
	Sober-Enthusiastic	8.88	2.97	5.90	2.42	4.08	.01
	Disregard rules-Conscientious	10.06	3.26	11.66	3.41	1.65	
	Shy-Adventurous	8.50	2.91	8.14	2.85	0.45	
	Tough minded-Tender minded	5.12	2.29	8.09	2.84	4.12	.01
	Zestful-Circumspect individualism	8.11	2.84	8.14	2.85	0.03	
	Selfassured-Apprehensive	8.29	2.87	8.47	2.91	0.22	
2	Sociably group dependent-Self sufficient	7.50	2.80	6.90	2.62	1.30	
3	Uncontrolled-Controlled	9.50	3.39	10.71	3.27	0.85	
4	Relaxed-Tense	7.08	2.84	7.80	0.66	0.35	

It is thus evident from the results shown in Table 10 that the female under-achievers in English are tough minded while the female under-achievers in Mathematics are tender minded.

On the rest twelve factors the differences between the female under-achieving groups in English and Mathematics are not significant.

The findings shown in Table 10 may be concluded as under:

The under-achieving girls in English are found to be:

(1) Enthusiastic, happy go lucky
(2) Tough minded

The under-achieving girls in Mathematics are found to be:

(1) Sober
(2) Tender minded

Comparison Between Female Over- and Under-Achievement in English on Fourteen Personality Factors (HSPQ)

Table 11 shows the significance of differences between female over- and under-achievers in English on fourteen personality dimensions. As seen in Table 11, the over- and under-achieving girls differ significantly on three personality factors designated

Table 11

Significance of Difference Between the Means of Female Over-achievers in English and Female Under-achievers in English

	Personality Factors	Female Over-achievers in English (N = 54)		Female Over-achievers in English (N = 34)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	8.22	2.86	9.52	3.08	2.03	.05
B	Less intelligent-More intelligent	4.35	2.08	5.00	2.23	1.10	
C	Affected by feeling-Emotionally stable	8.87	2.97	8.55	2.92	0.50	
D	Undemonstrative-Excitable	8.74	2.95	8.82	2.96	0.125	
E	Obedient-Assertive	6.12	2.47	6.14	2.47	0.03	
F	Sober-Enthsiastic	8.51	2.91	8.88	2.97	0.58	
G	Disregard rule-Conscientious	10.16	3.18	10.06	3.26	0.14	
H	Shy-Adventurous	9.12	3.01	8.50	2.91	1.60	
I	Tough minded-Tender minded	6.62	2.57	5.12	2.29	2.94	.01
J	Zestful-Circumspect individualism	8.20	2.86	8.11	2.84	0.14	
O	Self-assured-Apprehensive	7.64	2.76	7.16	2.87	0.78	
Q_2	Sociably group dependent-Self sufficient	7.03	2.65	7.50	2.80	0.78	
Q_3	Uncontrolled-Controlled	10.00	3.16	9.50	3.39	0.98	
Q_4	Relaxed-Tense	8.22	2.88	7.08	2.66	2.01	.05

as Reserved vs Warmhearted (A), Tough minded vs Tender minded (I) and Relaxed vs Tense (Q_4).

On factor A, Reserved vs Warmhearted the main scores of over- and under-achieving girls in English are 8.22 and 9.52 and S.Ds. are 2.86 and 3.08 respectively. The 't' value is found to be 2.03 which is significant at .05 level.

The results thus indicate that the over-achieving girls in English are less warm hearted. The under-achieving girls on the other hand are more warmhearted, out going and easy going.

On factor I, Tough minded vs Tender minded the means of the over- and under-achieving girls in English are 6.62 and 5.12 while the S.Ds. are 2.57 and 2.29 respectively. The 't' value is found to be 2.94 which is significant at .01 level.

It may be concluded from the above results that the over-achieving girls in English are more inclined to be tender minded while the under-achieving girls are tough minded.

The comparison between the over- and under-achieving girls in English on factor Q_4, the mean of the over- and under-achieving girls in English are 8.22 and 7.08 and the S.Ds. are 2.88 and 2.66 respectively. The 't' value is found to be 2.01 which is

significant at .05 level.

The results therefore indicate that the over-achieving girls in English are more tense, frustrated and fretful than their under-achieving counterparts in English.

On the rest eleven factors the differences between the both over- and under-achieving girls are not significant.

The findings as shown on Table 11 may be summarised as follows:

The female over-achievers in English are found to be:

(1) Less warmhearted, easy going and out going
(2) More inclined to be tender minded
(3) More tense, frustrated and fretful

The female under-achievers in English are found to be:

(1) More warmhearted, easy going, out going.
(2) Tough minded
(3) Less tense and less frustrated

Comparison Between Female Over-achievers and Under-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 12 shows the significance of differences between over- and under-achieving girls in Mathematics on fourteen personality dimensions. As can be seen

Table 12

Significance of Difference Between the Means of Female Over-achievers in Mathematics and Female Under-achievers in Mathematics

	Personality Factors	Female Over-achievers in Maths (N = 57)		Female Under-achievers in Maths (N = 21		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	9.38	2.86	10.38	3.22	1.26	
B	Less intelligent-More intelligent	5.03	2.08	5.38	2.31	0.62	
C	Affected by feeling-Emotionally stable	8.70	2.97	8.23	2.86	0.65	
D	Undemonstrative-Excitable	8.33	2.95	8.61	2.93	0.37	
E	Obedient-Assertive	5.96	2.47	5.91	2.42	0.08	
F	Sober-Enthusiastic	7.87	2.91	5.90	2.42	3.07	.01
G	Disregard rules-Conscientious	10.73	3.18	11.96	3.41	1.98	.05
H	Shy-Adventurous	8.35	3.01	8.14	2.85	0.29	
I	Tough minded-Tender minded	7.47	2.57	8.09	2.84	0.88	
J	Zestful-Circumspect individualism	7.82	2.86	8.14	2.85	0.44	
O	Self assured-Apprehensive	8.05	2.76	8.47	2.91	0.58	
Q_2	Sociably group dependent-Self sufficient	7.49	2.65	6.90	2.62	0.89	
Q_3	Uncontrolled-Controlled	11.35	3.16	10.71	3.27	0.87	
Q_4	Relaxed-Tense	9.66	2.88	7.80	2.79	2.66	.01

from Table 12, the female over-achievers in Mathematics differ significantly from female under-achievers on three personality factors, namely, Sober vs Enthusiastic (F), Disregard rules vs Conscientious (G) and Relaxed vs Tense (Q_4).

On factor F, Sober vs Enthusiastic the means of over- and under-achieving girls in Mathematics are 7.87 and 5.90 and S.Ds.are 2.91 and 2.42 respectively. The 't' value is found to be 3.07 which is significant at .01 level.

The results thus clearly exhibit that the female over-achievers in Mathematics are enthusiastic while the female under-achievers in Mathematics are sober and taciturn.

On factor G, Disregard rules vs Conscientious, the mean scores of both over- and under-achieving girls in Mathematics are 10.73 and 11.96 while the S.Ds. are 3.18 and 3.41 respectively. The 't' value is found to be 1.98 which is significant at .05 level.

Since the mean of the female over-achievers in Mathematics is lower than that of the under-achievers, it can be concluded that the female over-achievers in Mathematics are less conscientious than the female under-achievers in the same subject. The female under-

achieving subjects are, therefore, more conscientious than their over-achieving counterparts.

On factor Q_4, Relaxed vs Tense, the mean scores of over- and under-achieving girls in Mathmatics are 9.66 and 7.80 and the S.Ds. are 2.88 and 2.79 respectively. The 't' value is found to be 2.66 which is significant at .01 level.

The results thus clearly bring out that the female over-achievers in Mathematics are more tense while the under-achievers are less tense.

On the remaining eleven factors, the differences between female over- and under-achieving girls are not significant.

The findings shown in Table 12 may be concluded as under:

The over-achieving girls in Mathematics are:

(1) More enthusiastic
(2) Less conscientious
(3) More tense

The under-achieving girls in Mathematics are:

(1) Sober
(2) More conscientious
(3) Less tense

Comparison Between Male Over-achievers in English and Female Over-achievers in English on Fourteen Personality Factors (HSPQ)

As already mentioned, comparisons were also made to find out personality differences between male and female over-achievers as well as under-achievers in both the school subjects, namely, English and Mathematics. The results of such comparisons are given in Tables 13 and 16.

Table 13 shows the significance of difference between male and female over-achievers in English on fourteen personality factors.

As can be seen from Table 13, the male over-achievers differ significantly from female over-achievers in English on four personality factors, namely Undemonstrative vs Excitable (D), Shy vs Adventurous (H), Zestful vs Circumspect individualism (J), and Relaxed vs Tense.

On factor D, Undemonstrative vs Excitable, the means of the over-achieving male and female groups in English are 6.26 and 8.74 while the S.Ds.are 2.50 and 2.95 respectively. The 't' value is found to be 3.30 which is significant at .01 level.

The results give a clear evidence that the female over-achievers in English with their higher mean scores are more excitable while the male over-achievers in the

Table 13

Significance of Difference Between the Means of Male Over-achievers in English and Female Over-achievers in English

	Personality Factors	Male Over-achievers in English (N = 15)		Female Over-achievers in English (N = 54)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	7.13	2.67	8.22	2.86	1.39	
B	Less intelligent-More intelligent	4.33	2.08	4.35	2.08	1.02	
C	Affected by feeling-Emotionally stable	10.00	3.16	8.87	2.97	1.25	
D	Undemonstrative-Excitable	6.26	2.50	8.74	2.95	3.30	.01
E	Obedient-Assertive	5.13	2.26	6.12	2.47	1.47	
F	Sober-Enthusiastic	8.80	2.96	8.51	2.91	0.34	
G	Disregards rule-Conscientious	8.93	2.98	10.16	3.18	1.41	
H	Shy-Adventurous	7.86	2.80	9.12	3.01	1.98	.05
I	Tough minded-Tender minded	6.80	2.60	6.62	2.57	0.24	
J	Zestful-Circumspect Individualism	6.86	2.62	8.20	2.86	2.20	.05
O	Selfassured-Apprehensive	6.80	2.60	7.64	2.76	1.10	
Q_2	Sociably group dependent-Self sufficient	6.73	2.59	7.03	2.65	0.4	
Q_3	Uncontrolled-Controlled	9.60	3.09	10.00	3.16	0.44	
Q_4	Relaxed-Tense	6.02	2.50	8.22	2.88	2.97	.01

same subject are less excitable.

On factor H, Shy vs Adventurous, the mean scores of both the over-achieving boys and girls in English are 7.86 and 9.12 and the S.Ds. are 2.80 and 3.01 respectively, the 't' value being 1.98 which is significant at .05 level.

Since the mean score of over-achieving girls in English is higher than that of the other group, it can be concluded that female over-achievers in English are more adventurous than their male over-achieving counterparts in English.

The comparison between the male and female over-achieving groups in English on factor J, Zestful vs Circumspect individualism, the means of the over-achieving male and female groups in English are 6.86 and 8.20 while the S.Ds. are 2.62 and 2.86 respectively. The 't' value is found to be 2.20 and it is significant at .05 level.

The results thus indicate that the female over-achievers in English are more inclined to individualistic, reflective and internally restrained temperament while the male over-achievers are less inclined to the individualistic temperament.

On factor Q_4, Relaxed vs Tense, the means of the over-achieving male and female groups in English are

6.02 and 8.22 and S.Ds. are 2.50 and 2.88 respectively. The 't' value is found to be 2.97 which is significant at .01 level.

The results thus clearly bring out that on factor Q_4, the over-achieving girls in English with their significantly higher mean score are more tense, frustrated and fretful than the over-achieving boys in English. The over-achieving boys are thus less tense and less frustrated.

On the rest ten factors, the differences between the over-achieving male and female groups in English are insignificant.

The results presented in Table 13 thus reveal that the over-achieving males in English are:

(1) Less excitable
(2) Less adventurous
(3) Less individualistic
(4) Less tense and less frustrated

The female over-achievers are:

(1) More excitable
(2) More adventurous
(3) More individualistic
(4) More tense and frustrated

Comparison Between Male Over-achievers in Mathematics and Female Over-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 14 shows the significance of difference between male over-achievers in Mathematics and female over-achievers in Mathematics on fourteen personality factors.

As can be seen from the results shown in Table 14, the male over-achievers differ significantly from female over-achievers in Mathematics on six personality factors, namely, Less intelligent vs More intelligent (B), Affected by feeling vs Emotionally stable (C), Undemonstrative vs Excitable (D), Sober vs Enthusiastic (F), Disregard rules vs Conscientious (G) and Relaxed vs Tense (Q_4).

On factor B, Less intelligent vs More intelligent, the means of the both male and female over-achieving group in Mathematics are 3.85 and 5.03 and the S.Ds. are 1.96 and 2.42 respectively. The 't' value is found to be 2.22 and it is significant at .05 level.

It can be concluded from the results, therefore, that the over-achieving girls in Mathematics are more intelligent than the over-achieving boys in the same subject.

On factor C, Affected by feeling vs Emotionally

Table 14

Significance of Difference Between the Means of Male Over-achievers in Mathematics and Female Over-achievers in Mathematics

	Personality Factors	Male Over-achievers in Maths. (N = 20)		Female Over-achievers in Maths. (N = 57)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	8.95	2.95	9.38	3.05	0.56	
B	Less intelligent-More intelligent	3.85	1.96	5.03	2.42	2.22	.05
C	Affected by feeling-Emotionally stable	9.95	3.15	8.70	2.94	1.97	.05
D	Undemonstrative-Excitable	6.95	2.63	8.33	2.88	2.01	.05
E	Obedient-Assertive	5.75	2.39	5.96	2.44	0.34	
F	Sober-Enthusiastic	11.15	3.32	7.87	2.87	3.95	.01
G	Disregard rules-Conscientious	8.80	2.96	10.73	3.27	2.47	.05
H	Shy-Adventurous	8.10	2.84	8.35	2.88	0.34	
I	Tough minded-Tender minded	6.70	2.58	7.47	2.73	1.14	
J	Zestful-Circumspect individualism	6.60	2.56	7.82	2.79	0.68	
O	Self assured-Apprehensive	6.05	2.45	8.05	2.83	1.77	
Q_2	Sociably group dependent-Self sufficient	6.75	2.59	7.49	2.73	1.10	
Q_3	Uncontrolled-Controlled	9.98	3.14	11.35	3.30	1.67	
Q_4	Relaxed-Tense	7.89	2.75	9.66	3.10	2.45	.05

stable, the means of the male over-achievers and female over-achievers in Mathematics are 9.95 and 8.70 and S.Ds. are 3.15 and 2.94 respectively. The 't' value is found to be 1.97 which is significant at .05 level.

The results thus point out that the male over-achievers in Mathematics with their higher mean scores are emotionally more stable, calm, and of higher ego strength than the female over-achievers in Mathematics.

On factor D, Undemonstrative vs Excitable, the high scorers are more excitable and low scorers on the other hand are undemonstrative.

The means of the over-achieving male and female groups in Mathematics on this factor,as shown in Table 14, are 6.95 and 8.33 while the S.Ds. are 2.63 and 2.88 respectively. The 't' value is found to be 2.01 which is significant at .05 level.

The results thus indicate that on factor D, the female over-achievers in Mathematics are more excitable than the over-achieving boys in the same subject.

On factor F, Sober vs Enthusiastic,the means of the male over-achievers and female over-achievers in Mathematics are 11.15 and 7.87 while the S.Ds. are 3.32 and 2.87 respectively. The 't' value is found to be 3.95 which is highly significant at .01 level.

It can, therefore, be safely concluded that the over-achieving boys in Mathematics are more enthusiastic while the female over-achievers in the same subject are less enthusiastic.

On factor G, Disregard rules vs Conscientious, the means of the male and female over-achieving groups in Mathematics are 8.00 and 10.73 while the S.Ds. are 2.96 and 3.27 respectively. The 't' value which is significant at .05 level is found to be 2.47.

It can be concluded from the results, therefore, that the over-achieving girls in Mathematics with their higher mean scores are more prone to be conscientious while the over-achieving boys are less conscientious.

On factor Q_4, Relaxed vs Tense, the high scorers are more tense and frustrated. The low scorers on the other hand, are relaxed and less frustrated.

The means of the over-achieving boys and girls in Mathematics are 7.89 and 9.66 while the S.Ds. are 2.75 and 3.10 respectively. The 't' value is found to be 2.45 which is significant at .05 level.

It can be concluded from the above results that the female over-achievers in Mathematics are more frustrated, tense and fretful. On the other hand, the male over-achievers in the same subject are less

tense and less frustrated.

On the rest seven factors the differences between male and female over-achieving groups in Mathematics are insignificant.

The results presented in Table 14 show that the over-achieving boys in Mathematics are:

(1) Comparatively less intelligent.
(2) Emotionally stable
(3) Less excitable
(4) More enthusiastic
(5) Less conscientious
(6) Less tense

The over-achieving girls in Mathematics are:

(1) More intelligent
(2) Emotionally less stable
(3) More excitable
(4) Less enthusiastic
(5) More conscientious
(6) More tense and frustrated

Comparison Between Male and Female Under-achievers in English on Fourteen Personality Factors (HSPQ)

Table 15 shows the significance of differences between male and female under-achievers in English on fourteen personality factors.

As can be seen from Table 15, the under-achieving

Table 15

Significance of Difference Between the Means of Male under-achievers in English and Female Under-achievers in English

	Personality factors	Male Under-achievers in English (N = 72)		Female Under-achievers in English (N = 34)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	7.04	2.65	9.52	3.08	4.13	.01
B	Less intelligent-More intelligent	4.16	2.03	5.00	2.23	1.95	
C	Affected by feeling-Emotionally stable	10.20	3.19	8.55	2.92	2.66	.01
D	Undemonstrative-Excitable	7.38	2.71	8.82	2.96	2.44	.05
E	Obedient-Assertive	6.95	2.63	6.14	2.47	1.62	
F	Fober-Enthusiastic	10.30	3.20	8.88	2.97	2.29	.05
G	Disregard rules-Conscientious	5.75	2.39	10.06	3.26	7.06	.01
H	Shy-Adventurous	8.69	2.94	8.50	2.91	0.31	
I	Tough minded-Tender minded	7.11	2.66	5.12	2.29	4.14	.01
J	Zestful-Circumspect individualism	7.02	2.64	8.11	2.84	1.94	
O	Self assured-Apprehensive	7.18	2.67	8.29	2.87	1.77	
Q_2	Sociably group dependent-Self sufficient	6.62	2.57	7.50	2.80	1.57	
Q_3	Uncontrolled-Controlled	9.04	3.00	9.50	3.39	0.68	
Q_4	Relaxed-Tense	8.15	2.85	7.08	2.84	1.84	

boys in English differ significantly from under-achieving girls in English. On six personality dimensions, namely, Reserved vs Warmhearted (A), Affected by feeling vs Emotionally stable (C), Undemonstrative vs Excitable (D), Sober vs Enthusiastic (F), Disregards rules vs Conscientious (G) and Tough minded vs tender minded (I).

On factor A, Reserved vs Warmhearted, the means of both male and female under-achieving groups in English are 7.04 and 9.52 and the S.Ds.are 2.65 and 4.08 respectively. The 't' value is found to be 4.13 which is highly significant at .01 level.

The results thus clearly indicate that the female under-achievers in English are more warmhearted and easy going. The male underachievers on the other hand are less warm hearted.

Comparison between under-achieving boys and girls in English on factor C, Affected by feeling vs Emotionally stable, also shows significant difference between the two groups. The mean scores of the male and female under-achievers in English are 10.20 and 8.55 and S.Ds. are 3.19 and 2.92 respectively. The 't' value is found to be 2.66 which is again significant at .01 level.

It can be concluded from the results therefore

that the male underachievers in English are emotionally more stable, calm and of higher ego-strength. The female under-achievers in the same subject are emotionally less stable and possess lower ego strength.

On factor D, Undemonstrative vs Excitable, the means of the male and female under-achieving groups in English are 7.38 and 8.82 while the S.Ds. are 2.71 and 2.96 respectively. The 't' value is found to be 2.44 and it is significant at .05 level.

The results thus indicate that the female under-achievers in English are more excitable while the male under-achievers in English are less excitable.

On factor F, Sober vs Enthusiastic, the means of the male and female under-achievers in English are 10.30 and 8.88 and S.Ds. are 3.20 and 2.97 respectively. The 't' value is found to be 2.29 which is significant at .05 level.

The results, therefore, indicate that the male under-achievers in English are more enthusiastic and happy go lucky while the female under-achievers are less enthusiastic.

On factor G, Disregard rules vs Conscientious, the mean scores of male and female under-achieving groups in English are 5.75 and 10.06 and the S.Ds.

are 2.39 and 3.26 respectively. The 't' value is found to be 7.06 which is highly significant at .01 level.

It can be therefore, concluded from the results that the female under-achievers in English with their high mean score are more conscientious. The male under-achievers on the other hand, with their lower mean scores are less concientious in the same subject.

On factor I, Tough minded vs Tender minded, the means of the male under-achieving and female under-achieving groups in English are 7.11 and 5.12 and S.Ds. are 2.66 and 2.29 respectively. The 't' value is found to be 4.14 which is once again highly significance at .01 level.

The results thus clearly bring out that on factor I, the under-achieving boys in English with their significantly higher mean score are tender minded while the under-achieving girls in English with their lower mean score are tough minded.

On the remaining eight factors, the differences between the male and female under-achieving groups in English are not significant.

The findings shown in Table 15 may be concluded as under:

The male under-achievers in English are found to be:

(1) Less warm hearted
(2) Emotionally more stable
(3) Less excitable
(4) More enthusiastic
(5) Less conscientious
(6) More tender minded

The female under-achievers in English are found to be:

(1) More warm hearted, out going and easy going
(2) Emotionally less stable
(3) More excitable
(4) Less enthusiastic
(5) More conscientious
(6) Less tender minded.

Comparison Between Male and Female under-achievers in Mathematics on Fourteen Personality Factors (HSPQ)

Table 16 shows the significance of differences between male and female under-achievers in Mathematics on fourteen personality factors.

As can be seen from table 16, the male under-achievers in Mathematics differ significantly from female under-achievers in Mathematics on seven personality factors, namely Reserved vs Warm hearted (A), Less intelligent vs More intelligent (B), Affected by feeling vs Emotionally stable (C), Disregard rules vs Conscientious (G), Zestful vs Circumspect

Table 16

Significance of Difference Between the Means of Male Under-achievers in Mathematics and Female Under-achievers in Mathematics

	Personality factors	Male Under-achievers in Maths. (N = 72)		Female Under-achievers in Maths. (N = 21)		't' value	Level of significance
		Mean	SD	Mean	SD		
A	Reserved-Warmhearted	8.98	2.96	10.38	3.22	2.48	.05
B	Less intelligent-More intelligent	3.81	1.95	5.38	2.31	3.38	.01
C	Affected by feeling-Emotionally stable	10.37	3.22	8.23	2.86	3.50	.01
D	Undemonstrative-Excitable	7.55	2.74	8.61	2.93	1.79	
E	Obedient-Assertive	6.45	2.53	5.91	2.42	1.08	
F	Sober-Enthusiastic	10.22	3.19	5.90	2.42	0.76	
G	Disregard rules-Conscientious	5.90	2.42	11.66	3.41	8.75	.01
H	Shy-Adventurous	8.86	2.97	8.14	2.85	1.22	
I	Tough minded-Tender minded	7.08	2.66	8.09	2.84	1.80	
J	Zestful-Circumspect Individualism	4.59	2.14	8.14	2.85	6.69	.01
O	Self assured-Apprehensive	6.63	2.57	8.47	2.91	3.22	.01
Q_2	Sociably group dependent-self sufficient	6.59	2.56	6.90	2.62	0.58	
Q_3	Uncontrolled-Controlled	7.65	2.76	10.71	3.27	4.78	.01
Q_4	Relaxed-Tense	7.77	2.78	7.80	2.66	2.05	

individualism (J), Self-assured vs Apprehensive (O) and Uncontrolled vs Controlled (Q_3).

On factor A, Reserved vs Warm hearted, the means of the male and female under-achievers in Mathematics are 8.98 and 10.38 and S.Ds. are 2.96 and 3.22 respectively. The 't' value is found to be 2.18 which is significant at .05 level.

The results thus indicate that the female under-achievers in Mathematics are more warm hearted, out going and more easy going while the male under-achievers are less warm hearted.

On factor B, Less intelligent vs More inte. gent, the mean scores of both male and female under-achievers in Mathematics are 3.81 and 5.38 while the S.Ds. are 1.95 and 2.31 respectively. The 't' value is found to be 3.38 and it is significant at .01 level.

It is thus concluded from the results presented in Table 16 that the female under-achievers in Mathematics are more intelligent than their male counterparts.

Comparison between the male and female under-achieving groups in Mathematics on factor C, Affected by feeling vs Emotionally stable, the means of the male and female under-achieving groups are 10.37 and 8.23 while the S.Ds. are 3.22 and 2.86 respectively.

The 't' value is found to be 3.50 and it is again highly significant at .01 level.

The results give a clear evidence that the female under-achievers with their low mean score are emotionally less stable. The male under-achievers on the other hand, with their higher mean score, are emotionally more stable, calm and of higher ego-strength.

On factor G, Disregards rules vs Conscientious, the mean scores of male and female under-achievers in Mathematics are 5.90 and 11.66 while the S.Ds. are 2.42 and 3.41 respectively. The 't' value is found to be 8.75 which is highly significant at .01 level.

It can be concluded that the under-achieving girls in Mathematics are conscientious while the under-achieving boys in the same subject are less conscientious and disregard rules.

On factor J, Zestful vs Circumspect individualism, the mean scores of male under-achievers and female under-achievers in Mathematics are 4.59 and 8.14 and S.Ds. are 2.14 and 2.85 respectively. The 't' value is found to be 6.69 which is again highly significant at .01 level.

It can be concluded from the results presented in factor J, that the male under-achievers in Mathematics

are prone to be zestful while their female counterparts are prone to be circumspect individualism.

On factor O, Self-assured vs Apprehensive, the high scores represent apprehensive while the low score self-assured temperament. Here mean scores for male and female under-achievers in Mathematics are 6.63 and 8.47 while the S.Ds.are 2.57 and 2.91 respectively. The 't' value is found to be 3.22 which is once again highly significant.

The results thus clearly indicate that the female under-achievers in Mathematics are more apprehensive while the male under-achievers in same subject are less apprehensive.

On factor Q_3, Uncontrolled vs Controlled, the mean scores of the male and female under-achieving groups in Mathematics are 7.65 and 10.71 and S.Ds. are 2.76 and 3.27 respectively. The 't' value is found to be 4.78 which is significant at .01 level once again.

Since the mean score of the female under-achievers in Mathematics is significantly greater than that of male under-achievers in Mathematics, it is concluded that the female under-achievers in Mathematics are more controlled while the male under-achievers in Mathematics are less controlled.

On remaining seven factors, the differences between the male under-achievers and female under-achievers in Mathematics are insignificant.

The results shown in Table 16 may be summarised as under:

The male under-achievers are found to be:

(1) Less warm hearted
(2) Less intelligent
(3) Emotionally more stable
(4) Less conscientious
(5) Prone to be zestful
(6) Less apprehensive
(7) Less controlled

The under-achieving girls are found to be:

(1) More warm-hearted, out going and of participating characteristics
(2) More intelligent
(3) Emotionally less stable
(4) More conscientious
(5) More prone to circumspect individualism
(6) More apprehensive
(7) More controlled

The discussion on the findings of the present study is presented in the following chapter.

Chapter V

DISCUSSION

The present study, as stated earlier, was carried out mainly to find out differences in personality characteristics of the under-achievers in English and Mathematics with the assumption that the causal and concomitant personality factors might possibly be different for under-achievement in two different subjects, one literary the other scientific one.

The statistical treatment of the data revealed that there were significant personality differences between over-achievers and under-achievers; between the groups of over-achievers as well as under-achievers across different subjects, namely English and Mathematics. Marked differences were also found between male and female subjects both in the area of the over-achievement as well as under-achievement in the two subjects.

To find out whether under-achievers were different from over-achievers in English, comparisons were made between the two groups along fourteen personality dimensions. The over-achievers in English including

both male and female subjects were found to be more conscientious and obedient while the under-achievers in the same subject were less conscientious and less obedient rather prone to assertiveness and dominance. These two results are corroborated by the findings of Ridding (1966) and Haq (1987). It also seems quite convincing that the more conscientious and obedient are more likely to achieve higher than those who are less obedient and less responsible and less conscientious.

The other results also fall in line with the above conclusions. The over-achievers in English have been found to be more controlled and the under-achievers less controlled. It is quite resonable that those who are more self-controlled their behaviour would be more goal oriented and well-programmed. The absence of such characteristics would naturally lead to achieving below expectation.

Besides being less controlled the under-achievers in English have also been found to be more apprehensive, a characteristic which would never allow a person to reach up to the mark what to say of going beyond expectation in achievement. The over-achievers in English being less apprehensive are quite naturally prone to achieving excellence even beyond the expected level.

The result that the over-achievers in English are not so happy go lucky as their counterparts, the under-achievers, also happens to be a reasonable corollary of the above results. One can easily understand that the over-achievers being more conscientious, obedient and controlled can hardly over be happy go lucky fellows like their under-achieving counterparts; the hallmark of the over-achievers being responsibility, obedience and conscientious etc. It is only the under-achievers that would feel contented with their happy go lucky behaviour.

That the under-achievers in English are more tender-minded and over-achievers less tender-minded is also quite understandable. For greater and higher achievement too much of tendermindedness is not very much helpful. One has to be a bit toughminded for the consistency in decision for rising up and going above the expected level. The earlier result of greater apprehensiveness found in under-achievers seems to anticipate the characteristics of greater tender-mindedness going with under-achievement and lesser tendermindedness going with the over-achievement in English.

Literature in general and English literature in particular is in the real sense of the term are

expression and appreciation of human feelings and emotions. Quite naturally those who over-achieve in English language and literature, would be more sensitive to feelings and emotions. Emotional stability or the characteristic of being unaffected by feelings and emotions would never correspond with over-achievement in a beautiful language like English. The under-achievement would certainly go with unaffectedness and stability of emotions.

The over-achievers in Mathematics including both boys and girls have been found to be, as the subject itself demands, more intelligent, more conscientious and responsible as well as more adventurous, self reliant and more controlled than the under-achievers in the area. The result is quite understandable as a scientific subject like Mathematics possess challenges to the mental abilities and perseverance of the person. If any one over aspires to gain excellence in Mathematical subjects one has to have a high level of intelligence, sincerity of purpose and a controlled and self-reliant demeanour. One has also to be adventurous, ready to accept the challenges of mathematical problems. The lack of such characteristics would surely throw one into the ditch of under-achievement in Mathematics, as the present findings have quite vividly shown the phenomenon.

Due to almost a constant mental preoccupation, the over-achievers in Mathematics who are more devoted to and involved in the subject become tense and sometimes excitable and tenderminded. They are also apprehensive of unnecessary interaction and disturbances. They want to remain occupied in their individual problems. Hence characteristics such as tenseness, excitability, tender-mindedness, individualism and apprehensiveness may also be quite reasonably the concomitant factors going with over-achievement in Maths.

The under-achievers following the same logic will quite understandably be less intelligent, less conscientious, less adventurous and less controlled. They would not be so preoccupied mentally and tense as were their counterparts. They would also not be very sensitive to distracting elements and very much individualistic and self-involved.

What is a bit surprising in the greater warmheartedness of the mathematics over-achievers, a deeper understanding of the phenomenon would reveal that the high achievers and those who achieve even higher than their expected level are more likely to be well adjusted and warmhearted (Srivastava, 1967; Sharma, 1972; Kumawat, 1984).

Quite naturally the under-achievers in Mathematics

would be less adjusted and less warmhearted.

For having a clearer understanding of the differential personality phenomenon of the over- and under-achievers in English and Mathematics, comparisons were also made between male over- and under-achievers as well as female over- and under-achievers in both the subjects separately along the fourteen personality dimensions on the HSPQ.

While comparing the personality characteristics of the male over- and under-achievers in English, the over-achievers were found to be more obedient and more conscientious. They are also less enthusiastic. The results on these three dimensions of personality appear to be quite convincing -- the obedient and concientious pupils are more likely to gain from their teaching-learning situation. Those who are more obedient and serious about their responsibility would be very enthusiastic.

As a corollary of the above discussion, under-achievement would quite convincingly be more associated with assertion and aggression greater out bursts of enthusiasm as well as a lack in sincerity and conscientiousness. These characteristics quite significantly differentiate the total population of over- and under-achievers in English also as can be seen

from Table 3. There are other studies also that support the present findings to a greater extent. (Ridding, 1966; Haq, 1987).

The comparison between male over- and under-achievers in Mathematics yielded significant differences on three personality factors. The over-achievers in Mathematics were also found to be more conscientious than the under-achievers as was the case with male over-achievers and under-achievers in English. As such the repetition of discussion may be avoided for this particular dimension. The over-achievers in Mathematics have been found to be more controlled and individualistic while the under-achievers are less controlled and less self-involved. There seems to be an internal validity in these results when compared with the personality characteristics of the over- and under-achievers in Mathematics including both the sexes as given in Table No.4.

It is not surprising therefore, that the male over-achievers in Mathematics are more conscientious and the under-achievers are less conscientious; the over-achievers are more self-involved and individualistic and under-achievers in Mathematics are less involved; the male over-achievers in Mathematics are more controlled and male under-achievers in Mathematics are less controlled. Psychological studies as well as

our school experiences seem to buttress the present findings (Ridding, 1966; Saxena, 1972; Haq, 1987).

Comparisons were also carried out between the over- and under-achievers among the female subjects in English and Mathematics separately.

In the area of English the female over-achievers were found to be less warmhearted and under-achievers more warmhearted. On the factor of tendermindedness the over-achieving girls in English proved to be more tenderminded than the under-achievers. On the personality dimension of tenseness, the over-achievers were found to be more tense while the under-achieving girls in English were found to be less tense.

Warmheartedness, tendermindedness and tenseness which are generally the female characteristics (Dhaliwal, 1971; McRae et al., 1982; Haq, 1987) are found to be going with both the female over- and under-achieving subjects but only with varying degrees. Both the groups are warmhearted but the over-achievers being more preoccupied and tense, are quite naturally less warmhearted than their under-achieving counterparts. With greater tenseness, the over-achievers greater tendermindedness is also quite understandable. Once again it can be said that English language and literature being more akin to feeling the over-achievers in English are likely to be

more tenderminded than the under-achievers in the same subject.

As can be seen from table 12, the female over-achievers in Mathematics are more enthusiastic and tense than the under-achieving girls in Mathematics. Mathematics has yet not become a favourite subject of the girls in India. As can be seen from their very low enrolment as compared to that of boys in departments involving the mathematical sciences.

Mathematics being not a subject of the test, keeps the over-achieving girls far more tense than the under-achieving girls. They are also not very sincere and conscientious although they have to exhibit a lot of external effort and enthusiasm for higher achievement and achievement beyond expectation. The under-achieving girls seem to be quite contented with their under-achievement as they fail to show much enthusiasm about the subject. Consequently they are less tense than the labourious over-achievers who go very much against their will and conscience. The under-achievers have reasonably being found to be more conscientious than the over-achievers in obeying the dictates of their conscience, feeling not much concern about the subject against their taste.

As stated earlier, the main objective of the present investigation was to discern the differential

personality characteristics of over-achievers as well as under-achievers across the two selected subjects namely English and Mathematics. It was hypothesised that the over-achievers in English would exhibit some personality differences from those of over-achievers in Mathematics. It can be seen from the previous chapter that each of the two groups of over-achievers has emerged with quite different combination of personality characteristics.

Including both boys and girls,the over-achievers in English and Mathematics were found significantly different from each other on nine out of fourteen personality factors.

Where the differences are very much significant and glaring, the over-achievers in English have been found to be less warmhearted, less adventurous and less tenderminded. They are also less self-sufficient and less controlled than their counterparts, the over-achievers in Mathematics. These combinations of differential personality characteristics seem to have an internal coherence and a relative importance.

In comparison to English, Mathematics demands a greater control and greater self-sufficiency which has been found to be quite convincingly the mark of over-achievers in Mathematics. As has already been discussed, Mathematics is a challenging subject and demands a

greater amount of adventurousness and a high level of intelligence which the over-achievers in Mathematics have rightly been found to possess.

Mathematics being a more objective and scientific subject, the achievement in the area brings in greater confidence in the student. This greater confidence generates in him the quality of better adjustment and higher warmheartedness which has been found to be a prone disposition of over-achievers in Mathematics and not so much of the over-achievers in English.

There are three other factors out of nine where the differences are of the moderate kind yet following the line of the more marked differential characteristics of the over-achievers of English and over-achievers of Mathematics.

It is quite understandable that the over-achievers in Mathematics who have a greater control are also emotionally more stable than over-achievers in English. English literature being a treasure of feelings and emotions, renders the more involved person, more sensitive to feelings and emotions. It is therefore, quite understandable that the over-achievers in English are more prone to feelings and lack of emotional stability.

A difficult subject like Mathematics calls for a

higher sense of responsibility and conscientious than the subjects from the area of humanities. It is therefore quite natural that the over-achievers in Mathematics are more conscientious and responsible than those in English.

It seems quite convincing that the challenges of Mathematical problems are met with the greater enthusiasm of the over-achievers in Mathematics. The greater enthusiasm of the over-achievers in Mathematics quite understandably falls in line with their marked greater adventurousness and vice-versa for the English over-achievers. Thus the differential personality characteristics going with over-achievers in English and over-achievers in Mathematics quite convincingly seem to form the distinctive characteristic sets for the two compared groups.

When comparisons were made between over-achievers in English and over-achievers in Mathematics only among boys, the two groups were found to be different on three personality dimensions but quite moderately.

As has already been discussed the male over-achievers in Mathematics were found to be more warm-hearted and enthusiastic than the male over-achievers in English quite corresponding to the characteristics found in general with the over-achieving subjects in

Mathematics including both boys and girls. As such the same logic applies here too, to explain why the over-achievers in Mathematics have greater warmth and enthusiasm than the over-achieving boys in English.

The results that over-achieving boys in Mathematics are more tense than the over-achieving boys in English,needs a little explanation. Mathematics being a more difficult and tension creating subject than English language and literature, would quite convincingly make over-achievers in Mathematics more tense than the over-achievers in English.

When comparisons were made between the over-achieving girls in English and Mathematics,they were also found to differ on three personality dimensions.

Just like the boys the over-achieving girls in Mathematics were also found to be more tense than the over-achieving girls in English. And the same explanation for the difference, as given in case of boys, may also be presented here. But the repetition would simply prolong the discussion.

Similar is the case of greater warmheartedness of the over-achieving girls in Mathematics and the lesser warmheartedness of the over-achieving girls in English. Both boys and girls have been found to differ in the same direction and thus it would be

needless to repeat the logic already presented in the case of boys.

The result that the over-achieving girls in Mathematics are more controlled than the over-achieving girls in English, is quite interesting and rationalistic. Those who are familier with the greater objectivity of the mathematical subjects than that found in literature, can easily understand that Mathematics demands greater control on the part of students than does any other subject from art and literature. It is therefore, not surprising that the over-achieving girls in Mathematics are more controlled than the over-achieving girls in English.

As one of the objectives of the present study was also to see the male-female differences of the over- as well as under-achievers in English and Mathematics, comparisons were made first between the male-female over-achievers. In English the male over-achievers were found to be different from their female counterparts on four out of fourteen personality factors.

In case of English over-achievement, the boys were found to be less excitable and far less tense than the girls. The boys were also found to be, though quite moderately, less adventurous and less individualistic than the over-achieving girls in

English. Studies on personality dimensions of boys and girls give evidence of quite higher neuroticism, excitability and tenseness to be found in girls in comparison to the boys (Ridding, 1966; Dhaliwal, 1971; Haq, 1987).

It is found in life experiences also that the women subjects are more irritable and tense than the men in general. It is, therefore, quite convincing that the over-achieving girls are more excitable and tense than the over-achieving boys in English. The boys are less individualistic than the girls is very much evidenced by our social experiences. Boys are more gregarious and more exposed to group activity than girls who generally prefer to remain inside their homes or at least do not mix up with others as freely as the boys do. Thus the greater individualism of the girls is quite understandable.

Quite interesting to note, the girls who have over-achieved in English have been found to be more adventurous than the over-achieving boys in English. This point reflects a gradually emerging recent change in the interest of girls. Girls have been found to be aspiring for adventuresome activities which had not been the area of interest in the olden days (Blair, 1956; Parsley, et al., 1964; Jarvis, 1965).

Now-a-days the girls are ready to accept even military services and participate with full enthusiasm in open field games and sports. It has now become an international phenomenon. It is therefore not surprising that the over-achieving girls in English who are more akin to western culture exhibit greater adventuresomeness than the boys.

While comparing the male over-achievers in Mathematics with the female over-achievers one personality factor emerges where the difference is of high significance and it is on the factor of enthusiasm. The over-achieving boys have been found to be far more enthusiastic than the over-achieving girls in Mathematics and it seems to be quite natural as enthusiasm especially shown against challenging situation is more a part of the male subjects. Mathematics being rather a male area of interest is more enthusiasm provoking for the boys than for the girls.

There are other five factors on which over-achieving boys and girls in Mathematics show some differences but only on a moderate level, i.e., .05 level. Boys have been found to be emotionally more stable than the girls. And it is almost a general phenomenon as discussed earlier (Ridding, 1966; Dhaliwal, 1971; Menon, 1972; Haq, 1987).

As found in the case of over-achieving boys and girls in English, in Mathematics also the boys have been found to be less excitable and less tense than the over-achieving girls. As such the same logic given in the case of English over-achieving boys and girls may also be applied here.

Girls have been generally found to be more devoted, responsible and concentrative in their school work than the boys. It is therefore quite understandable that the over-achieving girls in Mathematics are more conscientious than the over-achieving boys in the present findings.

It is quite interesting to find that the over-achieving girls in Mathematics have been found to be a bit more intelligent than the boys. Psychological studies (Blair, 1956) have failed to find any significant superiority of males or females in general intelligence. As such a little superiority of girls over the boys or of the boys over the girls would not matter very much.

As it was stated at the very outset, the main thrust of the present investigation was on finding out if there were any personality differences between the under-achievers across the two selected subjects namely English and Mathematics. In this regard,

comparisons were made between the under-achieving subjects including both the sexes in the two subjects as well as between the under-achievers of the two subjects within the same sex and also inter-sex.

When the under-achievers in English (overall boys and girls) were compared with the under-achievers in Mathematics, it was found that the English under-achievers were far more tender minded and apprehensive than the under-achievers in Mathematics. As discussed in the case of over-achievers, these differences seem to be subject-oriented. As it is not the comparison between over- and under-achievement but a comparison between the under-achievers of the two subjects, it appears to be quite convincing that the English subject is more prone to sensitivity of feelings and emotions; and therefore, are more tender-minded and apprehensive than the cases in Mathematics, which by the virtue of being more an objective and scientific subject,has little to do with the emotional side of life. As such, the Mathematics students are not surprisingly less tender-minded and less apprehensive than their counterparts in English.

A strange phenomenon seemsto occur when the feeling prone under-achievers in English appear to be more controlled than their counterparts in Mathematics

but a deeper analysis of this characteristic complexity would reveal that the situation of swinging between the two extremes or contradictory characteristics creating a dilemma would never be helpful for academic achievement. The outcome of this dilemma would quite naturally be under-achievement, whether it is English or Mathematics. However, the difference lies in the direction of swinging between the two subject areas. The English under-achievers swinging between more controlled and more tender-mindedness while the under-achievers in Mathematics swinging between lesser controlled and lesser tendermindedness.

The comparisons between the male under-achievers in English and Mathematics yielded significant differences on three personality dimensions. The under-achievers in Mathematics were found to be more warm-hearted and zestful than the under-achievers in English. The latter in their turn were found to be more individualistic and less warmhearted. These two results seem to be quite convincing as more zestfulness of the under-achievers in Mathematics would go quite reasonably with warmheartedness; and individualism of the under-achievers in English with less warmhearted-ness. The third result seems to be a corollary of the above two findings. The more warmhearted and zestful

pupils would quite naturally be less controlled as it appears in case of under-achievers in Mathematics; and the more individualistic and less warmhearted pupil would quite expectedly exhibit greater control as can be seen in the case of under-achievers in English. The reason why the Mathematics students are more zestful,warmhearted and less controlled and the under-achievers in English more individualistic, less warm-hearted and more controlled, may be traced in the nature of the school subjects themselves. Mathematics being a more challenging subject evokes greater enthusiasm, warmth and freedom than literary subject like English with lesser challenges.

The findings concerning the personality characteristics going with female under-achievers in English and Mathematics, are very much in consonance with earlier results in the two subjects. Girls being more enthusiastic about language matters have quite reasonably been found to be more enthusiastic than those in Mathematics. The greater enthusiasm quite naturally goes with lesser tendermindedness. The girls in English are also less tenderminded than their counterparts in Mathematics.

The comparisons between under-achieving boys and girls in English has yielded very significant differences on four personality factors and moderately

significant differences on other two personality factors.Where the personality difference is sharper between the two sexes the male under-achievers in English have been found to be less warmhearted, less conscientious but emotionally more stable and more tenderminded than the female under-achievers in English. The male under-achievers in English have shown moderately significant differences on excitability and enthusiasm. They have been found to be less excitable but more enthusiastic than the female under-achievers in English.

What has been said about the overall under-achievers in English seems to be true for the male and female under-achievers in English also. Both the male and female cases seem to suffer from the dilemma of opposing characteristics. The male under-achievers in English have been found to be less warmhearted but more enthusiastic, emotionally more stable but also more tenderminded. Such contradictory characteristics would make them swing between the two extremes and only contribute towards their growing under-achievement. The same thing can be said about the female under-achievers in English who are just the reverse of boys along the six different personality characteristics. Both male and female cases seem to suffer from self contradiction and thus fail to achieve upto their

expectations. As contradiction would never allow one to remain one directional or goal oriented what had happened to Hamlet, happens to every undecisive personality: "... to be or not to be that is the question", a perfect sign of a certain failure in achievement in general.

The comparison between male and female under-achievers in Mathematics yielded highly significant differences between the two sexes on six personality dimensions. The female cases were found to be more intelligent, conscentious and individualistic than their male counterparts. At the same time they were also found to be more controlled than the male under-achievers in Mathematics. However, the female cases emerged as more apprehensive and emotionally less stable than the male under-achievers in Mathematics. A difference of moderate significance was also found on the factor of warmheartedness. The girls were found to be more warmhearted than the boys.

Emotional instability and greater warmhearted-ness seem to be quite common characteristics with the female under-achievers. Almost similar differences have been found both in Mathematics and English, with the under-achieving girls. It is also quite convinc-ing that the emotionally less stable would quite

logically be more apprehensive as in the case of the female under-achievers in Mathematics. The reverse being true for the male cases they were emotionally more stable and less apprehensive. With the male under-achievers in Mathematics being low in intelligence and being less controlled and less conscientious all such characteristics are quite understandable against the background of their under-achievement, Mathematics being a difficult subject specially for the girls (Ridding, 1966; Haq, 1987), a subject in which they are generally not interested, it is quite reasonable why they have failed to achieve up to the expected standards in spite of their some favourable characteristics like greater control and conscientiousness and higher intelligence in comparison to the male cases.

It can thus be inferred from the foregoing discussion of the present findings that both the groups of over-achievers in English and Mathematics have quite different personality characteristics -- each of the two groups having distinctive characteriestic combinations. Thus the results on personality dimensions of over- and under-achievers confirmed the first hypothesis of the present work that "The over-achievers in English would be different

from the over-achievers in Mathematics in their personality characteristics".

As can be seen from the above discussion, the under-achievers in English also exhibit significant differences from the under-achievers in Mathematics on different personality factors. As such the second hypothesis of present investigation, "the under-achievers in English would also be different from the under-achievers in Mathematics in their personality characteristics," stands confirmed.

The results emerging from the comparison along fourteen personality dimensions between male over- and under-achievers in English as well as in Mathematics show distinctive personality characteristics going with each group of over- and under-achievers in both the subjects. Thus it can be reasonably said that the results on differences between over- and under-achieving boys in both the subjects confirmed the third hypothesis of the present investigation, that is "the over- and under-achieving boys in English would differ from the over- and under-achieving boys in Mathematics along their personality characteristics".

As can be seen from the results on the personality characteristics of over- and under-achieving girls

in English as well as in Mathematics, the over-achievers have been found clearly differing from the under-achieving girls in both English and Mathematics with reference to their combination of personality characteristics. As such the findings in this regard confirmed the fourth hypothesis of the present study, that is "the over- and under-achieving girls in English would also exhibit personality differences when compared with the over-under achieving girls in Mathematics respectively."

The results of comparison between male and female over- and under-achievers in English as well as in Mathematics have clearly shown that male over-achievers in English differ from female over-achievers in English, male over-achievers in Mathematics differ from female over-achievers in Mathematics in their personality characteristics. As for the under-achievers the male under-achievers in English differ from the female under-achievers in English and the male under-achievers in Mathematics differ from the female under-achievers in Mathematics on different personality factors each group having its own distinctive characteristic combinations. Thus the result on sex differences in both the subjects -- English and Mathematics -- confirmed the fifth

hypothesis of the present investigation, that is "the male over- and under-achievers would differ from the female over- and under-achievers in each of the two school subject areas respectively."

Chapter VI

SUMMARY AND CONCLUSION

The purpose of the present investigation was primarily to identify the personality differences between the under-achievers in English and Mathematics. In order to get at these differential characteristics, the study was conducted on differences between over- and under-achievers on one hand and between over- as well as under-achievers across the two subjects, namely English and Mathematics on the other. Over-achievement, in this regard, refers to the positive discrepancy and under-achievement to the negative discrepancy between actual achievement score and the score predicted on the basis of intelligence. Both the phenomena have been recognised as psychological problems, but under-achievement is becoming far more menacing and damaging in the realm of education. Achieving below the level predicted through intelligence is a clear wastage of the individual's potentials and an irrepairable loss of human resource.

The review of related studies which is presented in Chapter II would reveal that intelligence, being

very closely associated with academic achievement is the most reliable predictor of school achievement (Dhaliwal, 1971; McCandless et al., 1972; Glossop, et al., 1979; Roberge and Flexer, 1981; Yule et al., 1982). However, the correlations between the two variables have never been found to be perfect. As such a portion of population always remains unpredicted through intelligence, which is generally dubbed the 'residuals'.

The problems of the 'residuals' have very often attracted the attention of the investigators. They have tried to explore the non-cognitive factors which could be responsible for the failure of prediction through intelligence. The investigators in this field satisfied themselves with exploring personality and environmental factors going with academic achievement. These studies at best have indicated the relationship between certain non-cognitive factors and high and low achievement but do not indicate the extent of operation of these factors on achievement when the effect of intelligence is accounted for (Savage, 1966; Rai, 1974; Koul, 1978; Vora, 1978; Khurshid Mohammad and Fatima Rafat, 1978; Traub, 1984; Kumawat, 1985).

Some studies based on the clear concept of over- and under-achievement, have tried to find out the non-

intellective personal factors of over- as well as under-achievers (Rao, 1963; Taylor, 1964; Srivastava, 1967; Morrison, 1969; Bharudi, 1971; Dhaliwal, 1971; Sharma, 1972; Menon, 1972; Agarwal, 1976; McRae, et al., 1982; Stockhard and Wood, 1984). It has been found from these studies that over-achievement generally goes with superior study habits, poor social adjustment and security feelings and under-achievement with good social adjustment, insecurity feelings and unrealistic goal orientation. Although these studies of over- and under-achievement have provided valuable data regarding the differential personality characteristics of over- and under-achievers, yet have derived over- and under-achievement from the total achievement scores of the subjects, which hardly represent the achievement level of the individual in specific subjects.

Only a few investigators have attempted to study the individuals' achievement in individual school subjects and tried to find out personality factors which are intimately correlated with academic performance (Ridding,1966; Saxena, 1972; Haq, 1987). These few studies have indicated some differential characteristics going with over-achievement and under-achievement in different school subjects. The findings call for further empirical evidences as well

as serve as a threshold for a new dimension of exploration, i.e., the identification of personality characteristics of over-achievers as well as under-achievers across different school subject areas.

The present work, as such, was therefore carried out with the following objectives:

(1) To find out the personality differences between the over-achieving groups in different school subjects.

(2) To find out the differential personality factors going with over- and under-achievers in different school subjects.

(3) To find out the personality factors differentiating the male and female subjects in different knowledge areas both among over- and under-achievers.

The hypotheses formulated for the present study were as under:

(1) The over-achievers in English would be different from the over-achievers in Mathematics in their personality characteristics.

(2) The under-achievers in English would also be different from the under-achievers in Mathematics in their personality characteristics.

(3) The over- and under-achieving boys in English would differ from the over- and under-achieving boys in Mathematics along their personality characteristics.

(4) The over- and under-achieving girls in English would also exhibit personality differences when compared with the over- and under-achieving girls in Mathematics respectively.

(5) The male over- and under-achievers would differ from the female over-under achievers in each of the two school subject areas respectively.

The present study was conducted on a sample of 302 students from X class of boys' and girls' high and higher secondary schools from Nagaon, Assam.

In the present investigation the investigator employed the following standard tools and measures:

(1) The Culture Fair Intelligence Test (Scale 2)

(2) Cattell and Beloff's HSPQ Test (Kapoor and Mehrotra, Form A, 1973)

For achievement scores of 302 students in two specific school subjects, the investigator had to rely upon the school achievement records.

For further statistical treatment, the intelligence and achievement scores were converted into 'Z' scores.

The over- and under-achievers in both English and Mathematics were identified with the help of regression equation as suggested by Throndike (1963). After obtaining the predicted achievement scores, discrepancies between the actual and predicted scores were calculated to find out the cases falling above and below the predicted scores in each of the two

subject areas. Those who were lying one S.De above the predicted score were designated as over-achievers and those lying one SDe below as under-achievers in each of the two subjects, among boys and girls separately.

Following were the sixteen pairs of groups formulated for comparisons of fourteen personality dimensions:

Overall Comparisons

1. Over-achievers in English vs Over-achievers in Mathematics
2. Under-achievers in English vs under-achievers in Mathematics
3. Over-achievers in English vs under-achievers in English
4. Over-achievers in Mathematics vs under-achievers in Mathematics

Among Boys

5. Male over-achievers in English vs Male over-achievers in Mathematics
6. Male under-achievers in English vs male under-achievers in Mathematics
7. Male over-achievers in English vs Male under-achievers in English
8. Male over-achievers in Mathematics vs Male under-achievers in Mathematics.

Among Girls

9. Female over-achievers in English vs female over-achievers in Mathematics

10. Female under-achievers in English vs female under-achievers in Mathematics

11. Female over-achievers in English vs female under-achievers in English

12. Female over-achievers in Mathematics vs female under-achievers in Mathematics

Sex differences among over- and under-achievers

13. Male over-achievers in English vs female over-achievers in English

14. Male over-achievers in Mathematics vs female over-achievers in Mathematics

15. Male under-achievers in English vs female under-achievers in English

16. Male under-achievers in Mathematics vs female under-achievers in Mathematics

The 't' test was employed to find out the significance of differences between the sixteen pairs of groups. The results of the 't' test have been presented in Tables 1-16.

The findings of the present investigation may be summarised as follows:

(1) The over-achievers in English were found to be more prone to be warmhearted (A), less

intelligent (B), emotionally less stable (C), less enthusiastic (F), less conscientious (G), less adventurous (H), less tenderminded (I), socially group dependent (Q_2), and less controlled (Q_3) than the over-achievers in Mathematics.

(2) The under-achievers in English were more prone to tendermindedness (I), apprehensive (O) and controlled than the under-achievers in Mathematics.

(3) Over-achievers in English differed from under-achievers in English on seven personality factors. The over-achievers in English were found to be emotionally less stable (C), assertive (E), enthusiastic (F), conscientious (G), less tenderminded (I), less apprehensive (O) and more controlled (Q_3).

(4) The differences between over- and under-achievers in Mathematics were found on eleven factors. The over-achievers in Mathematics were found to be more warmhearted (A), more intelligent (B), less excitable (D), more conscientious (G), more adventurous (H), more tenderminded (I), more individualistic (J), apprehensive (O), self sufficient (Q_2), more controlled (Q_3) and more tense (Q_4) than the under-achievers in Mathematics.

(5) The male over-achievers in English were found to be less warmhearted (A), less enthusiastic (F) and less tense (Q_4) than the male over-achievers in Mathematics.

(6) Male under-achievers in English differed from male under-achievers in Mathematics only on three personality measures. The under-achievers in English were found to be less warmhearted (A), more individualistic (J) and more controlled (Q_3) than the under-achievers in Mathematics.

(7) The male over-achievers in English differed from male under-achievers in same subject on three personality factors. The male over-achievers in English were found to be less assertive (E), less enthusiastic (F) and more concientious than the male under-achievers in English.

(8) The male over-achievers in Mathematics were found to be more prone to be conscientiousness (G), individualistic (J), and more controlled (Q_3) than the male under-achievers in Mathematics.

(9) The female over-achievers in English were more prone to warmheartedness (A), less controlled (Q_3) and less tense (Q_4) while the female over-achievers in Mathematics were more inclined to be reserved, more controlled and more tense.

(10) The female under-achievers in English exhibited significant differences on two out of fourteen personality factors. The female under-achievers in English were found to be more enthusiastic (F), and less tenderminded (I) while the female under-achievers in Mathematics were found to be less enthusiastic and more tough minded.

(11) Among girls, over-achievers in English were more inclined to warmheartedness (A), tender-

minded (I) and tense (Q_4) than the under-achievers in English.

(12) The female over-achievers in Mathematics exhibited significant differences on three out of fourteen personality factors. The over-achieving girls were found to be more enthusiastic (F), less conscientious (G) and more tense (Q_4) than the under-achieving girls in Mathematics.

(13) The over-achieving boys in English were found to be less excitable (D), less adventurous (H), less individualistic (J) and less tense than the female over-achievers in English.

(14) In Mathematics the over-achieving boys were emotionally stable (C), less intelligent (B), less excitable (D), more enthusiastic (F), less conscientious (G) and less tense (Q_4) than the female over-achievers in Mathematics.

(15) The under-achieving boys in English were found to be less warmhearted (A), emotionally more stable (C), less excitable (D), more enthusiastic (F), less conscientious (G) and more tenderminded than the under-achieving girls in Mathematics.

(16) In Mathematics the under-achieving boys were found to be less warmhearted (A), less intelligent (B), emotionally stable (C), less conscientious (G), more zestful (J), less apprehensive (O), and less controlled (Q_3) than the under-achieving girls in Mathmatics.

The findings of the present study thus empirically reveal certain personality characteristics going with under-achievement in English and Mathematics specifically as different from those going with over-achievement both among boys and girls;and as such the study serves as a threshold for further research work in the realm of identification and early prediction of under-achievement to prevent the loss of human resource, to an extent,through remedial measures.

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IPAT

APPENDIX-A

Test of "g": CULTURE FAIR

Scale 2, Form A

Prepared by R. B. Cattell and A. K. S. Cattell

Name _____ Sex _____
First Last (Write M or F)

Name of School (or Address) _____

Today's Date _____ Grade (or Class) _____

Date of Birth _____ Age _____
Month Day Year Years Months

Test	Score	Remarks
1		
2		
3		
4		
	Total Score	

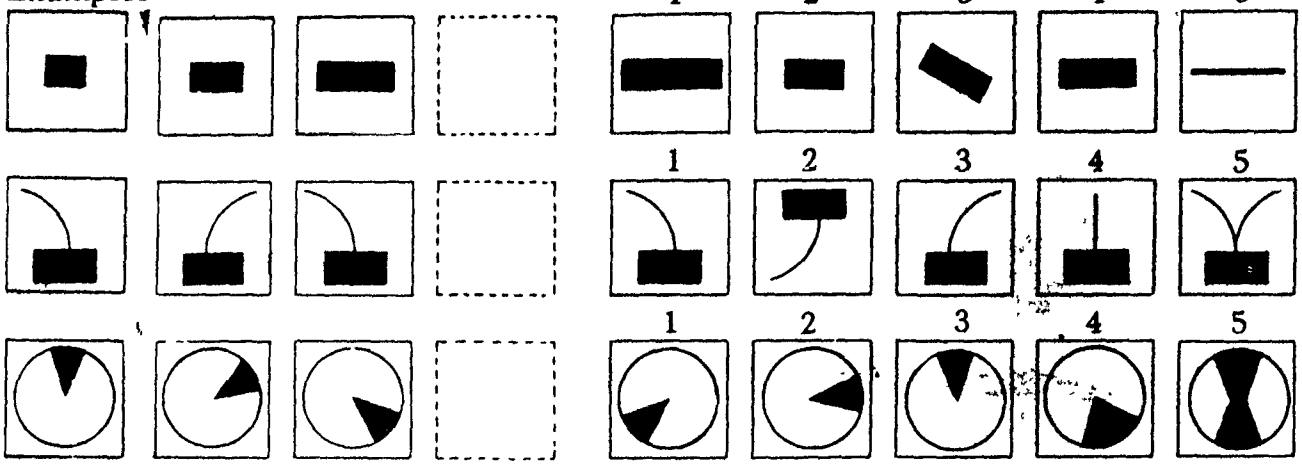
M. _____

Q. _____

Do not turn the page until told to do so

TEST 1

Examples



Answers

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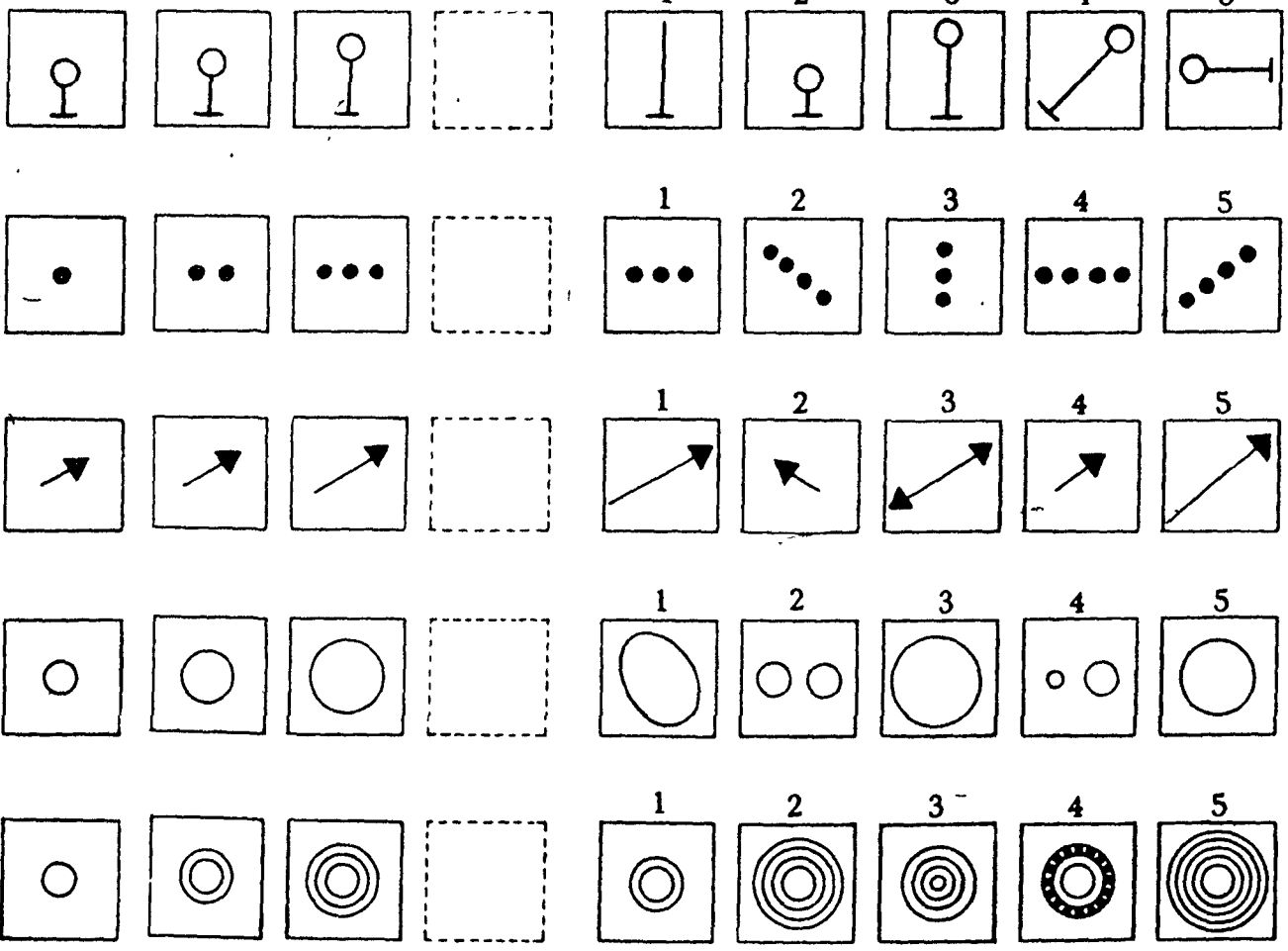

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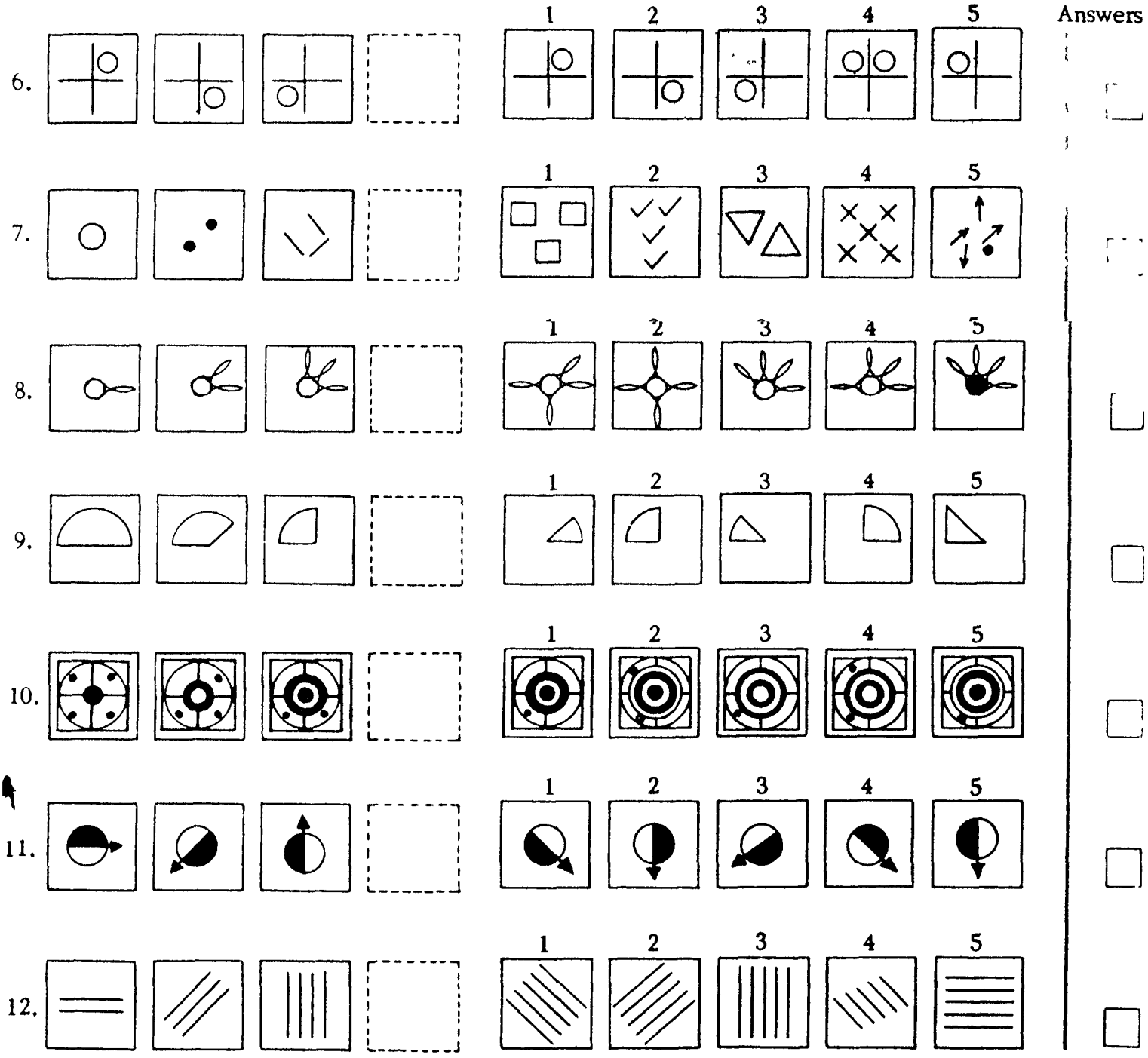

End of Test 1

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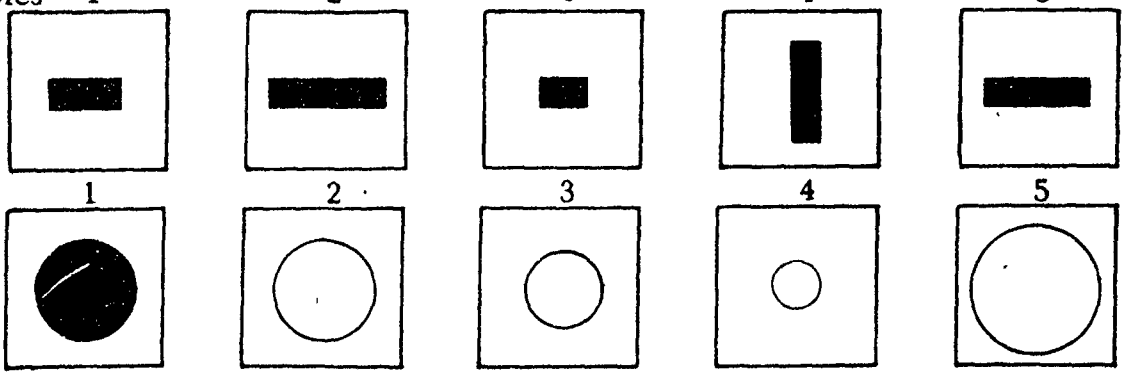
TEST 2

Examples



Answers

4

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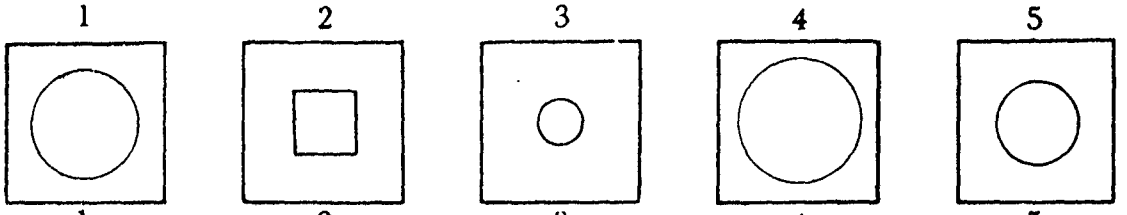

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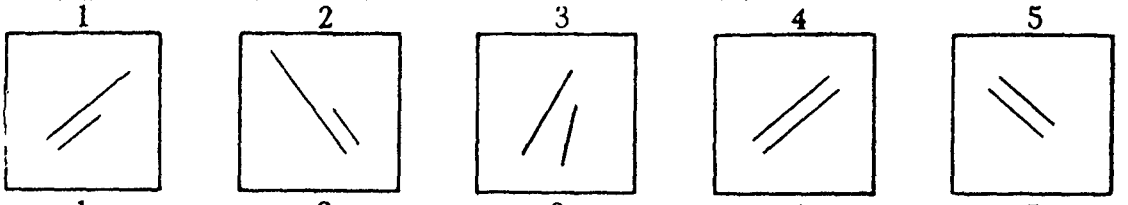

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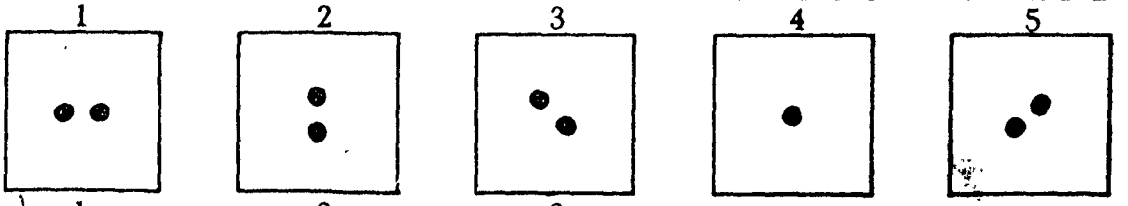

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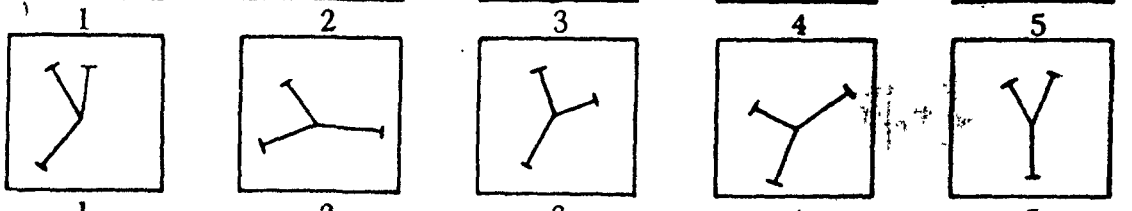

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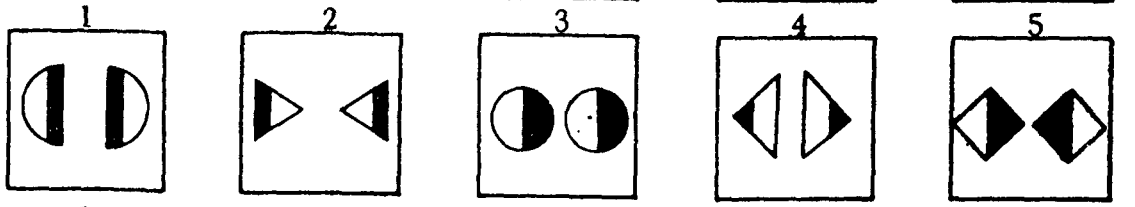

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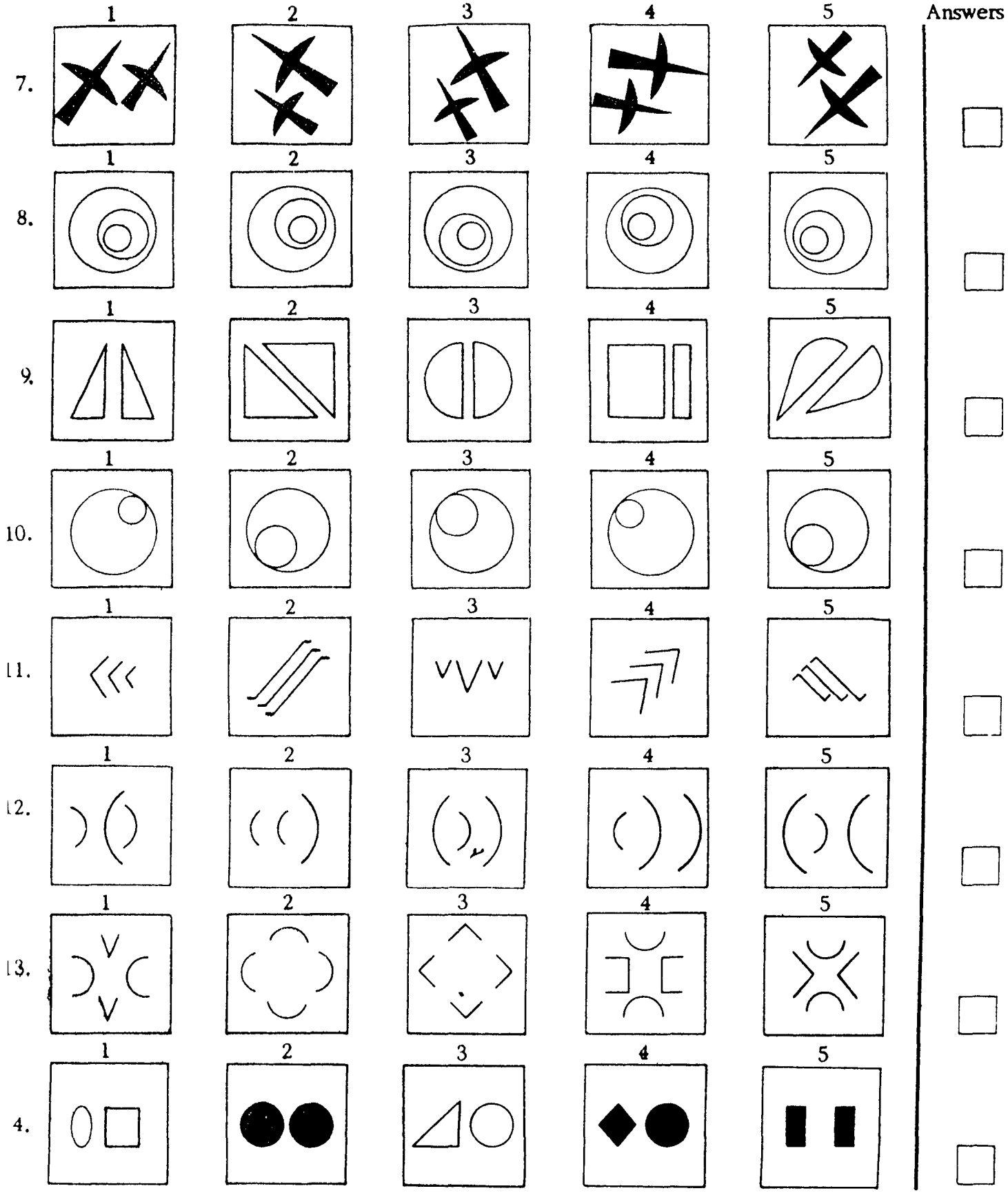
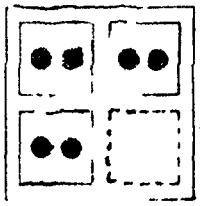


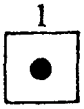
End of Test 2

STOP! Do not turn the page until told to do so

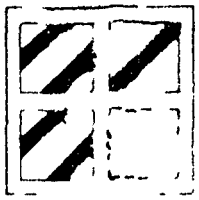
TEST 3

Example



1  2  3  4  5 

Answers [3]



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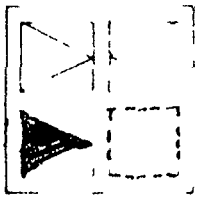

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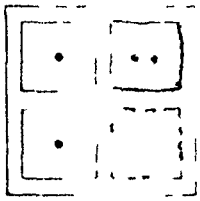
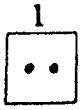
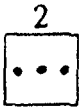
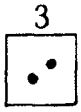
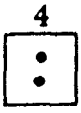
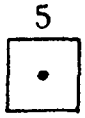
1. 

1  2  3  4  5 

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2. 

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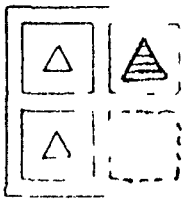
3. 

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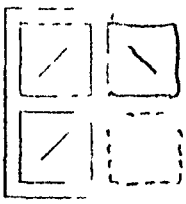
4. 

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5.

1 2 3 4 5

[ ]

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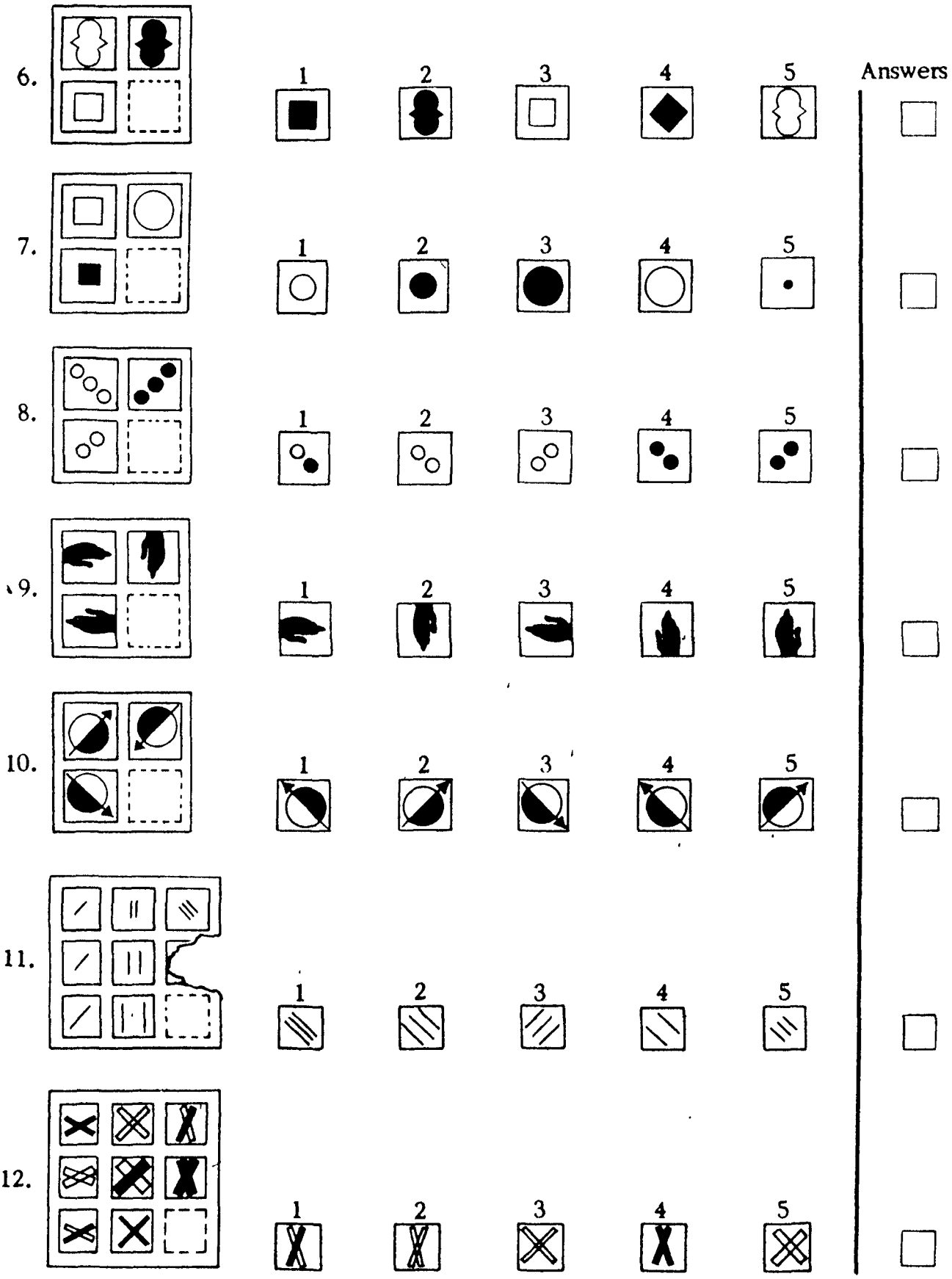

End of Test 3

STOP! Do not turn the page until told to do so.

TEST 4

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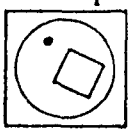
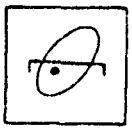
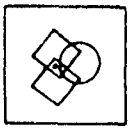
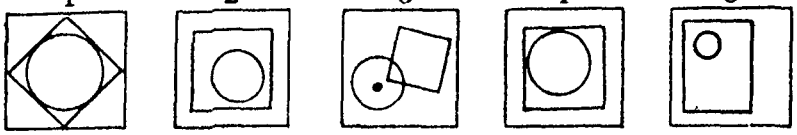






1 2 3 4 5



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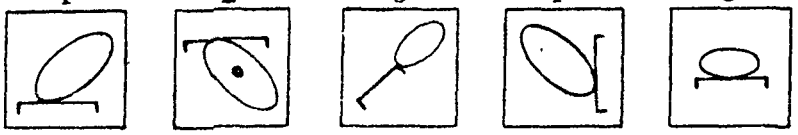

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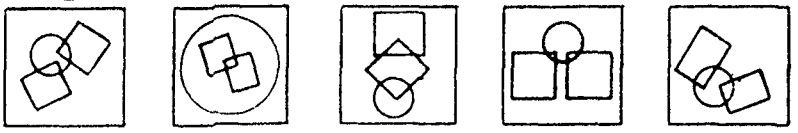

Answers

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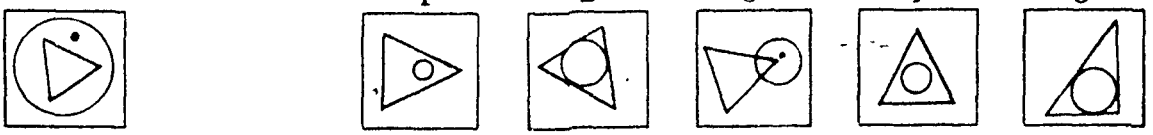

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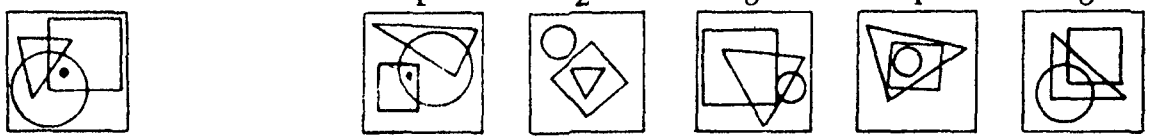

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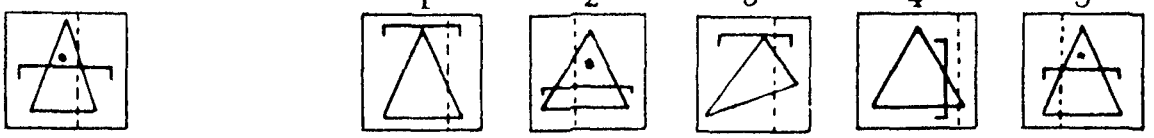

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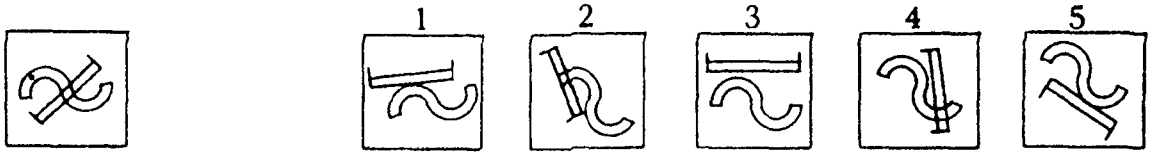

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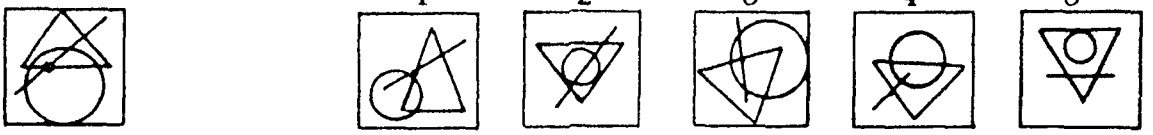

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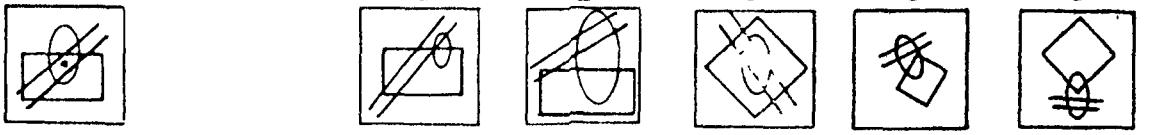

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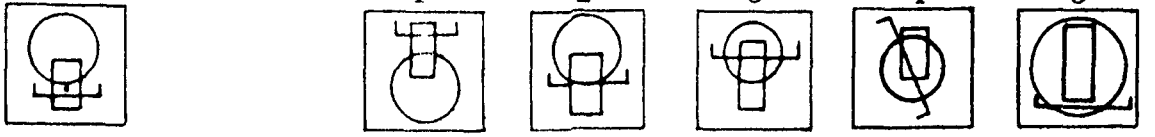
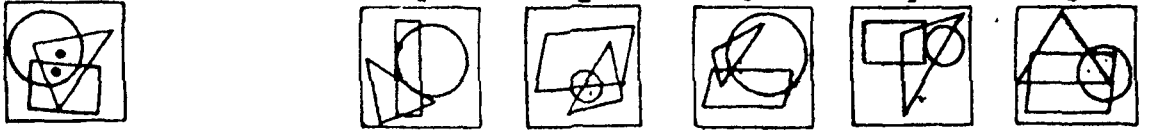


8. 1 2 3 4 5



End of Test 1

The PSYCHO CENTRE

Jr.-Sr.

H. S. P. Q.

K V C J 1967 Hindi Edition

FORM A
(Revised)

APPENDIX-B

Prepared by :
S. D. Kapoor and K. K. Mehrotra
(Original Test Authors are Dr. R. B. Cattell and Halla Beloff)

निर्देश

इस प्रश्नावली से तुम्हारे व्यक्तित्व के बारे में पता लगेगा। इसमें तुम्हारी पसन्द एवं रुचियों के विषय में प्रश्न दिये गये हैं। तुमको क्या करना है यह तो उदाहरणों द्वारा स्पष्ट कर दिया जायेगा। प्रश्न तुमको इस पुस्तिका में पढ़ने हैं और अपने उत्तर तुमको साथ में दिये गये उत्तर-पत्र पर लिखने हैं। ध्यान रहे, न तो तुम्हें इस पुस्तिका पर कुछ लिखना है और न किसी प्रकार का कोई निशान लगाना है।

उदाहरण :—

१ खाली समय में तुम क्या करना चाहोगे ?
(क) पुस्तकालय में अध्ययन करना, (ख) अनिश्चित, (ग) सैर-सपाटा करना।

२. किसी से झगड़ा होने पर क्या तुम आसानी से दुबारा मित्रता कर लेते हो ?
(क) हां, (ख) अनिश्चित, (ग) नहीं।

इन उदाहरणों से स्पष्ट है कि कोई भी उत्तर 'सही' या 'गलत' नहीं है। हर एक व्यक्ति की रुचियां अलग-अलग होती हैं, इसलिये तुम अपने बारे में जैसे सोचते या समझते हो, केवल वही उत्तर सही और ठीक है। प्रत्येक प्रश्न के तीन उत्तरों में से एक उत्तर तुमको ऐसा मिलेगा जो औरों की अपेक्षा तुमको कुछ अधिक उपयुक्त लगेगा। अतः प्रत्येक प्रश्न के दिये हुए तीन उत्तरों में से किसी एक पर उत्तर-पत्र में बने हुए खाने (Box) के अन्दर एक सही का (√) निशान अवश्य लगाओ।

जिस प्रकार के प्रश्न ऊपर दिये गये हैं वैसे ही बहुत से प्रश्न इस पुस्तिका के भीतर तुमको मिलेंगे। जब तुमसे पन्ना पलटने को कहा जाए तो पहले प्रश्न से शुरू करो और अन्त तक करते चले जाओ। प्रश्न का उत्तर देते समय नीचे लिखी बातों पर ध्यान देना आवश्यक है :—

(१) प्रश्नों के उत्तर सच्चाई से तथा निस्संकोच भाव से दो, क्योंकि गलत उत्तर देने से तुम्हारा कोई लाभ नहीं है। तुम जैसे हो या जैसा करते हो वैसा ही उत्तर दो। यह मत सोचो कि कैसा उत्तर देना उचित है।

(२) यद्यपि इस प्रश्नावली के लिये कोई समय निश्चित नहीं है, फिर भी तुम प्रश्नों का उत्तर शीघ्रता से दो। तुम अपना निर्णय सोच-विचार कर देने की अपेक्षा तुरन्त मन में आये हुये विचारों के आधार पर दो। कुछ प्रश्न एक दूसरे से मिलते-जुलते मालूम पड़ते हैं परन्तु कोई भी दो प्रश्न बिलकुल एक से नहीं हैं। अतः तुम्हारे उत्तर भी अलग-अलग हो सकते हैं।

(३) बीच वाला उत्तर अर्थात "अनिश्चित" (या 'ख') केवल तभी प्रयोग में लाओ जबकि पहले या बाद वाले उत्तर का चुनाव बिलकुल असम्भव हो। अतः अधिकतर 'हां' (या 'क') 'नहीं' (या 'ग') के उत्तर ही प्रयोग में लाना चाहिये।

(४) किसी भी प्रश्न को मत छोड़ो। अगर कोई प्रश्न पूर्णतः तुम पर लागू नही हो या तुम्हारी रुचि के अनुकूल न हो, केवल तभी तुम 'अनिश्चित' (या 'ख') के नीचे वाले खाने में निशान लगाओ।

अगर तुम्हें कुछ पूछना है तो अभी पूछ सकते हो, और यदि बाद में कोई कठिनाई समझनी हो तो स्वयं आकर पूछ सकते हो। किन्तु बगल में बैठे साथी को परेशान मत करो।

संकेत मिलने पर पन्ना उलटो और प्रश्नों का उत्तर देना आरम्भ कर दो।

१. जिन निर्देशों को अभी तुमने पढ़ा है, क्या तुम उन्हें ठीक से समझ गये हो ?
(क) हां, (ख) अनिश्चित, (ग) नहीं ।

२. यदि तुम किसी पिकनिक में गये हो तो, क्या थोड़े समय के लिये :
(क) अकेले इधर उधर घूमने निकल जाओगे, (ख) अनिश्चित, (ग) सब के साथ किसी मनोरंजन में भाग लोगे?

३. "मरम्मत" का अर्थ है :
(क) ठीक करना, (ख) खराब करना, (ग) उन्नति करना ।

४. यदि तुमसे कोई बेवकूफी हो जाती है तो क्या तुम [illegible] करते हो कि तुम्हारी इच्छा होती है कि पृथ्वी में गड़ जाओ ?
(क) हां, (ग) नहीं ।

५. क्या किसी समस्या पर तुम्हारा निर्णय अन्य लोगों की अपेक्षा :
(क) निश्चित होता है, (ख) दोनों के बीच में, (ग) हिचकिचाहट-पूर्ण होता है ?

६. जब कोई काम बुरी तरह बिगड जाता है तो बजाय उसे सुधारने के, क्या तुम लोगों पर बहुत क्रोधित हो जाते हो ?
(क) अक्सर, (ख) कभी-कभी, (ग) शायद ही कभी ।

७. अपने मित्र से विचारों में मतभेद होने पर, क्या तुम अपने अच्छे विचारो को इसलिए व्यक्त नही करते कि कहीं उसकी भावनाओं को ठेस न पहुँचे ?
(क) हां, (ख) शायद, (ग) नही ।

८. क्या अधिकतर लोगों को तुम्हारे संग-साथ में आनन्द आता है,?
(क) हां, खूब, (ख) लगभग सामान्य, (ग) नहीं ।

९. क्या तुमको तंग गुफाओं में जाना या ऊंचे स्थानों पर चढ़ना नापसन्द है ?
(क) हां, (ख) कभी-कभी, (ग) नहीं ।

१०. निम्नलिखित बातों में से कौन सी बात तुम्हारे व्यक्तित्व पर अधिक लागू होती है ?
(क) विश्वास योग्य नेता, (ख) दोनों के बीच मे, (ग) देखने में सुन्दर व आकर्षक ।

११. क्या तुमको किसी बड़ी पार्टी या पिकनिक मे जाने के पहले कभी-कभी ऐसा लगता है कि वहां जाने में तुम्हारी अधिक रुचि नही है ?
(क) हां, (ख) शायद, (ग) नही ।

१२. जब तुम्हारा लोगों पर क्रोध करना उचित होता है तो क्या तुम सोचते हो कि उन पर तुम्हारा चिल्लाना बिल्कुल ठीक है ?
(क) हां, (ख) शायद, (ग) नहीं ।

१३. सहपाठियों द्वारा यदि तुम्हारा मजाक बन जाये, तो क्या तुम बिना विचलित हुए सबके समान आनन्द लेते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

१४. क्या तुम हमेशा अपनी वास्तविक भावनाओं के बारे में बतला सकते हो, जैसे तुम थक गये हो या केवल बोर हो गये हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

१५. क्या तुम सोचते हो कि समय आने पर तुम्हारे एक प्रसिद्ध और लोकप्रिय व्यक्ति बनने की उचित सभावना है ?
(क) हां, (ख) शायद, (ग) नही ।

१६. प्रायः तुम्हे जितने अंक(नम्बर)मिला करते हैं उनसे अधिक मिलने पर क्या तुमको ऐसा लगता है कि अध्यापक से कोई गलती हो गई हो?
(क) हां, (ख) शायद, (ग) नही ।

१७. क्या तुम चाहोगे कि तुम देखने में अत्यधिक सुन्दर लगो जिससे कि तुम जिधर भी जाओ तो लोग तुम्हारी तरफ देखें ?
(क) हां, (ख) शायद, (ग) नहीं ।

१८. किसी बात से परेशानी अनुभव करने पर, क्या तुम :
(क) कुछ देर रुक कर शान्ति से काम लेते हो, (ख) अनिश्चित, (ग) अपना गुबार निकाल देते हो ?

१९. क्या तुम्हारे साथ किसी ने ऐसा मजाक किया है जिसकी याद से ही तुमको कष्ट होता है ?
(क) हां, (ख) कभी-कभी, (ग) नही ।

२०. यदि तुम्हे अपने व्यक्तिगत विचारों व भावनाओं को व्यक्त करने का अवसर मिले, तो क्या तुम :
(क) कुछ विचारों को अपने ही मन में रखोगे, (ख) अनिश्चित, (ग) उन्हे व्यक्त करने में आनन्द का अनुभव करोगे ?

२१ क्या तुमको कभी नाटक में भाग लेने में आनन्द आया है, जैसे स्कूल के नाटक इत्यादि में ?
(क) हां, (ख) अनिश्चित, (ग) नहीं ।

२२. "सत्य" का उल्टा है :
(क) काल्पनिक, (ख) झूठ, (ग) अस्वीकृत ।

२३. स्कूल में जो भी पढाया जाता है क्या उसे तुम पूरी तरह से समझ लेते हो ?
(क) हां, (ख) अधिकतर, (ग) नही

२४. यदि तुम्हारे मित्र कोई कार्य कर रहे हों और तुमको उसमें सम्मिलित न करें, तो क्या :
(क) तुम सोचोगे कि उन्होंने गलती की है, (ख) दोनों के बीच में, (ग) तुम्हे ठेस लगेगी और क्रोध आयेगा ?

२५ क्या लोगों का कहना है कि तुम कभी-कभी लापरवाह और ढीले-ढाले से रहते हो, यद्यपि उनके विचार में तुम अच्छे व्यक्ति हो ?
(क) हां, (ख) शायद, (ग) नही ।

२६. और लोगो की अपेक्षा क्या तुम कक्षा में अपने दोस्तों के साथ अधिक हँसते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

२७ क्या तुम प्रत्यक्ष के सामने यह दिखाने के लिये तत्पर रहते हो कि तुम दूसरों की अपेक्षा कितना अच्छा कार्य कर लेते हो ?
(क) हां, (ख) शायद, (ग) नही ।

२८ क्या तुम लोगों को यह बताना पसन्द करते हो कि वह कायदे-कानून का पालन करें ?
(क) हां, (ख) कभी-कभी, (ग) नहीं ।

२९ आमतौर पर जब कोई तुमसे बहुत जल्दी-जल्दी या बहुत ही धीरे-धीरे बोलता है तो क्या तुम धैर्य से उसकी बात सुन लेते हो ?
(क) हां, (ख) कभी-कभी, (ग) नही ।

३०. क्या तुम अजनबी लोगों के बीच बिना जरा सा भी घबराहट या कठिनाई का अनुभव किये वह बात कह लेते हो जो कहना चाहते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

३१. क्या कुछ विशेष प्रकार के चलचित्र तुमको विचलित कर देते है ?
(क) हां, (ख) शायद, (ग) नही ।

३२. किसी सुहावनी सन्ध्या के समय तुम प्राय: क्या देखना पसन्द करोगे ?
(क) घुड़दौड़, (ख) अनिश्चित, (ग) खुले मैदान में संगीत का कार्य-क्रम ।

३३. क्या कभी-कभी तुम यह सोचते हो कि लोग इतने अज्ञानी हैं कि वह अपनी भलाई बुराई भी नहीं समझते ?
(क) सत्य है, (ख) शायद, (ग) सत्य नहीं है ।

३४. क्या तुमको कभी-कभी ऐसा लगता है कि तुम बहुत अच्छे व्यक्ति नही हो, और न कभी कोई महत्वपूर्ण कार्य करते हो ?
(क) हां, (ख) अनिश्चित, (ग) नहीं ।

३५. पहली कक्षा में क्या तुम बिना मां के जोर डाले स्कूल चले जाते थे ?
(क) हां (ख) कभी-कभी, (ग) नहीं ।

३६. क्या तुम कभी-कभी बेवकूफी की बातें केवल इसलिये कहते हो कि देखें लोग क्या कहते हैं ?
(क) हां, (ख) शायद, (ग) नहीं ।

३७. यदि तुम किसी काम में लगे हो और कोई ऊंचे स्वर में संगीत शुरू कर दे, तो क्या फिर भी तुम काम में लगे रह सकते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

३८. क्या तुमको लगता है कि तुम्हारी अधिकांश आवश्यकताएं उचित प्रकार से सन्तुष्ट होती रहती हैं ?
(क) हां, (ख) शायद, (ग) नही ।

३९. संगीत या नृत्य में क्या तुम नई लय या ताल को आसानी से सीख लेते हो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

४०. अपने सहपाठियों से बात करते समय क्या तुम अपनी अत्यन्त व्यक्तिगत भावनाओं को बताना नापसन्द करते हो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

४१. "निश्चयी" शब्द का उल्टा है :
(क) कठोर, (ख) दयालु, (ग) चंचल।

४२. क्या ब्लैक बोर्ड पर चाक (खड़िया) की रगड़ तुमको अजीब सी लगती है ?
(क) हां, (ख) शायद, (ग) नहीं।

४३. बिना शोरगुल से प्रभावित हुए क्या तुम लगन से कार्य कर सकते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

४४. क्या अन्य लोगों की अपेक्षा घटनाओं का निरीक्षण तुम भिन्न प्रकार से करते हो जिसके कारण उनसे तुम्हारा मतभेद हो जाता है ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

४५. स्कूल के बाद तुम क्या करना चाहोगे ?
(क) ऐसा कार्य जिससे लोग तुम्हें गरीब होते हुए भी पसन्द करें, (ख) अनिश्चित, (ग) खूब पैसा कमाना।

४६. तुम क्या बनना चाहोगे ?
(क) स्कूल में सबसे लोकप्रिय विद्यार्थी, (ख) अनिश्चित, (ग) सर्वोत्तम अंक पाने वाला विद्यार्थी।

४७. जो भी तुम करते हो क्या उसके बारे में दृढ़ और निश्चित रहते हो ?
(क) शायद ही कभी, (ख) कभी-कभी, (ग) हमेशा।

४८. उन लोगों के साथ जो प्रश्न का उत्तर देने में बहुत देर लगाते हैं, तुम क्या करते हो ?
(क) चाहे जितनी भी देर लगे बोलने देते हो, (ख) दोनों के बीच में, (ग) उनका उत्तर जल्दी समाप्त करने की कोशिश करते हो और अगर वह अधिक समय लगाते हैं तो बीच में ही काट देते हो।

४९. क्या तुम्हारे हृदय को आसानी से ठेस लग जाती है ?
(क) हां, (ख) शायद, (ग) नहीं।

५०. क्या तुमको सुन्दर नाच देखने के बजाय कुश्ती देखना अच्छा लगता है ?
(क) हां, (ख) शायद, (ग) नहीं।

५१. यदि कोई तुम्हारे प्रति निर्दयता करता आया हो तो क्या तुम उस पर सरलता से विश्वास करके उसको एक और अवसर दे देते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

५२. अवकाश का समय तुम कैसे व्यतीत करोगे ?
(क) टिकट संग्रह द्वारा स्वयं कोई पुस्तक पढ़ करके, (ख) अनिश्चित, (ग) किसी के आदेशानुसार सामूहिक योजना में कार्य करके।

५३. क्या तुमको लगता है कि हर अपेक्षित कार्य को करते हुए तुम ठीक-ठाक चल रहे हो ?
(क) हां, (ख) शायद, (ग) नहीं।

५४. क्या किसी नये फैशन के शुरू होने पर :
(क) तुम उसे फौरन अपना लेते हो, (ख) अनिश्चित, (ग) सोच-विचार करके कुछ समय बाद अपनाते हो ?

५५. क्या तुम कभी-कभी अध्यापक को कक्षा में चर्चा के लिए कोई नया विषय सुझाते हो ?
(क) हां, (ख) अधिकतर, (ग) नहीं।

५६. जब तुम साहसिक कहानी पढ़ते हो, तो क्या :
(क) उसके सुखमय अन्त के लिए चिन्तित रहते हो, (ख) अनिश्चित, (ग) कहानी के पढ़ने में आनन्द लेते हो ?

५७. जब तुम किसी महत्वपूर्ण खेल में बुरी तरह से हार जाते हो, तो क्या तुम :
(क) कहते हो कि यह तो केवल खेल है, (ख) अनिश्चित, (ग) नाराज हो जाते हो और अपने आपको धिक्कारते हो ?

५८. जब तुम नये लोगों के बीच में जाते हो, तो क्या :
(क) शीघ्र ही तुमको लगता है कि जैसे सबको जान गये हो, (ख) दोनो के बीच में, (ग) लोगों को जानने में काफी समय लगता है ?

५९. "धनी" का "पैसे" से वही सम्बन्ध है जो "दुःखी" का :
(क) परेशानी, (ख) मित्र, (ग) भूमि से है।

६०. "चित्र" का "दृश्य" से वही सम्बन्ध है जो "उपन्यास" का :
(क) मुहल्ला, (ख) इतिहास, (ग) पुस्तक से है।

६१. क्या तुम अक्सर बड़ी-बड़ी योजनाएं बनाते और उनके बारे मे उत्तेजित रहते हो तथा अन्त में सोचते हो कि वह पूरी नहीं हो सकती?
(क) हां, (ख) यदाकदा, (ग) नहीं।

६२. तुम्हारे कोई चीज निर्माण करते समय अगर कुछ चीजें टूट जायें या अचानक नष्ट हो जायें तो क्या तुम शान्त रह पाते हो ?
(क) हां, (ख) शायद, (ग) नहीं, मुझे बहुत क्रोध आता है।

६३. क्या तुमने अपने माता-पिता से कभी भी यह कहा है कि कुछ अध्यापक बहुत ही पुराने फैशन के हैं और वह आजकल के युवकों को (जैसे तुम और तुम्हारे दोस्त) समझ नही पाते ?
(क) हां, (ख) शायद, (ग) नहीं।

६४. क्या तुम ऐसे अध्यापको को अधिक पसन्द करते हो जो तुमको बतायें कि कार्य किस तरह करना चाहिये ?
(क) हां, (ख) शायद, (ग) नहीं।

६५. क्या तुम उन लोगो में से हो जो अपनी मित्र-मंडली में हंसी-मजाक के चुटकुले सुनाया करते हैं ?
(क) हां, (ख) शायद, (ग) नहीं।

६६. क्या तुम प्रति सप्ताह अपने जेब खर्च का अधिकांश भाग मौज उडाने में खर्च कर देते हो [बजाय इसके कि काफी भाग भविष्य की आवश्यकताओं के लिये बचाओ] ?
(क) हां, (ख) शायद, (ग) नहीं।

६७. अगर लोगों की नजरें तुम्हारे कार्य पर लगी हो, फिर भी क्या तुम बिना अधिक त्रुटियां किये कार्य अच्छी तरह कर सकते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

६८. क्या किसी चीज के आजमाने में तुम्हें संकोच होता है चाहे तुमको पता हो कि उसमें खतरा नहीं है ?
(क) हां, (ख) शायद, (ग) नहीं।

६९. तुम कौन सा विषय लेना पसन्द करोगे ?
(क) गणित, (ख) अनिश्चित, (ग) साहित्य :

७०. जब तुम अपनी मित्र-मंडली में होते हो तो अधिक समय किसमें व्यतीत करते हो ?
(क) दोस्ती का आनन्द लेने में, (ख) अनिश्चित, (ग) जो हो रहा है उसे देखने में।

७१. क्या तुमने कभी यह सोचा है कि अगर संसार मे केवल तुम ही एक व्यक्ति रह जाओ तो क्या करोगे ?
(क) हां, (ख) अनिश्चित, (ग) नही।

७२. किसी के गुनगुनाने पर क्या वही धुन तुम भी गुनगुनाने लगते हो ?
(क) हां, (ख) अनिश्चित, (ग) नहीं।

७३. प्रायः तुम क्या पसन्द करोगे ?
(क) पुलों का निर्माण करना, (ख) अनिश्चित, (ग) चलते फिरते सर्कस की पार्टी का सदस्य होना।

७४. स्कूल में अवकाश (खाली समय) के समय तुम क्या करोगे ?
(क) ताश खेलोगे, (ख) अनिश्चित, (ग) घर के लिये जो काम मिला है उसको करोगे ?

७५. क्या तुम साधारणतया
(क) स्वयं निर्णय करते हो कि क्या ठीक है, (ख) अनिश्चित, (ग) जैसे और लोग करते हैं वैसे ही करते हो ?

७६. जब तुम अंधेरी सुनसान गली में चल रहे होते हो तो क्या अक्सर तुमको लगता है कि कोई तुम्हारा पीछा कर रहा है ?
(क) हां, (ख) शायद, (ग) नहीं।

७७. तुम कहां रहना पसन्द करोगे ?
(क) एक निर्जन घने जंगल मे जहां केवल चिड़ियों का संगीत है, (ख) अनिश्चित, (ग) सड़क के किनारे जहां खूब चहल-पहल रहती है।

७८. "प्रायः" का अर्थ होता है :
(क) कभी-कभी, (ख) हमेशा, (ग) बहुधा।

७९. अगर सब देवदार के पेड़ नोंकदार होते हैं और जितने नोंकदार पेड़ होते हैं वह हमेशा हरे रहते हैं तो नीचे लिखी कौनसी बात सत्य है ?
(क) सब देवदार के पेड़ हमेशा हरे रहते है, (ख) सब हरे रहने वाले पेड़ देवदार के पेड़ होते हैं, (ग) सब देवदार के पेड़ नोकदार होते हैं।

८०. तुम्हारी उम्र के एक सामान्य व्यक्ति से जो अपेक्षा की जाती है, क्या तुम उसको पूरा करते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

८१. रेडियो सुनते समय अगर तुम्हारे चारों ओर लोग हंसते व बातें करते है, तो क्या :
(क) तुम बिना चिन्ता किये रेडियो सुन सकते हो, (ख) दोनों के बीच मे, (ग) मजा किरकिरा हो जाता है और तुमको झुंझलाहट होती है ?

८२. यदि तुम जीव-विज्ञान के किसी विद्यार्थी के साथ दौरे पर निकलो तो तुमको किसमें अधिक आनन्द आयेगा ?
(क) चिड़िया पकड़ने और उनको पिंजड़े मे रखने में, (ख) अनिश्चित, (ग) चिड़ियों की सुन्दर फोटो या पेन्टिंग बनाने में।

८३. क्या तुम अपने दोस्तों मे इस बात के लिये प्रसिद्ध हो कि तुम अपने वैच्छिक कार्यों की पूर्ति के लिए कुछ भी कर सकते हो ?
(क) हां, (क) शायद, (ग) नहीं।

८४. सामूहिक योजनाओं में तुम किस रूप में कार्य करना पसन्द करोगे ?
(क) एक अच्छे नेता के रूप मे, (ख) दोनों के बीच में, (ग) एक अच्छे अनुयायी के रूप में।

८५. क्या अक्सर लोग तुम्हारे रास्ते मे अपनी टांग अड़ाते है ?
(क) हां, (ख) शायद, (ग) नहीं।

८६. क्या तुम अपनी कक्षा के सामने बिना किसी घबराहट और परेशानी के खड़े हो सकते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

८७. क्या तुमको लगता है कि स्कूल में तुम्हारे अध्यापक :
(क) तुम्हें जानते हैं, (ख) अनिश्चित, (ग) कदाचित तुम्हें जानते भी न हों

८८. जब तुम सिनेमा में कोई बहुत ही दुखद घटना देखते हो तो क्या :
(क) तुम्हें आंसुओं को रोकना कठिन हो जाता है, (ख) अनिश्चित, (ग) तुम समझते हो कि यह सब तो केवल काल्पनिक है ?

८९. अगर कोई कार्य सामूहिक रूप में किया जाना हो, तो क्या अक्सर तुमको यह कहने में परेशानी होती है कि :
(क) इस काम को हम सब लोग मिलकर कर लेंगे, (ख) अनिश्चित, (ग) मैं इसमें सम्मिलित नहीं होऊंगा ?

९०. स्कूल में नीचे लिखे कौन से परिवर्तन के लिये तुम अपनी सम्मति दोगे ?
(क) कक्षा में पिछड़ने वाले विद्यार्थियों की अलग कक्षाएं बनायी जाएं, (ख) अनिश्चित, (ग) अनावश्यक दंड का बहिष्कार किया जाय।

९१. जब तुम्हारे काम आश्चर्यजनक रूप में हो रहे हों, तो क्या तुम :
(क) प्रायः खुशी में उछल पड़ते हो, (ख) अनिश्चित, (ग) मन ही मन खुश होकर ऊपर से शांत रहते हो ?

९२. क्या तुम उन बहुत से लोगों की तरह हो जो आसमान में बिजली चमकने से कुछ डर जाते हैं ?
(क) हां, (ख) शायद, (ग) नहीं।

९३. क्या तुम सोचते हो कि तुम्हारी मित्र-मंडली मिलकर जो निर्णय लेती है वे किसी एक व्यक्ति के निर्णय से घटिया होते हैं और उनमें समय अधिक लगता है ?
(क) हां, (ख) शायद, (ग) नहीं।

९४. किसी कार्य की तीव्र इच्छा होने पर क्या तुम उसे कर डालते हो, चाहे उसमें कुछ शर्म ही क्यों न लगे ?
(क) हां, (ख) शायद, (ग) नहीं।

९५. यदि कोई तुम्हारे विचारों से असहमत हो, तो क्या तुम :
(क) उसकी बात बीच में काट देते हो, (ख) अनिश्चित, (ग) उसे अपनी पूरी बात कह लेने का मौका देते हो ?

९६. जब कोई नया अध्यापक तुम्हारी कक्षा में आता है, तो क्या उसकी दृष्टि तुम पर जल्दी पड़ जाती है और वह तुमको याद रख पाता है ?
(क) हां, (ख) शायद, (ग) नहीं।

९७. इन पांच शब्दों को देखो : नीचे, निकट, ऊपर, पीछे, बीच में। कौनसा वह शब्द है जो औरो से मेल नहीं खाता है ?
(क) नीचे, (ख) बीच में, (ग) निकट।

९८. क्या तुम बिना किसी वास्तविक कारण के कभी-कभी बहुत उदास हो जाते हो ?
(क) हां, (ख) अनिश्चित, (ग) नही।

९९. अगर कोई तुमसे किसी नये और कठिन कार्य को करने के लिये कहता है, तो क्या तुम :
(क) खुश होते हो और अपनी योग्यता का परिचय देते हो, (ख) शायद, (ग) ऐसा अनुभव करते हो कि कहीं गड़बड़ न हो जाय ?

१००. कक्षा मे पूछे गये प्रश्न का उत्तर देने के लिये जब तुम अन्य छात्रों के साथ हाथ उठाते हो, तो क्या उत्तेजित हो जाते हो ?
(क) कभी-कभी, (ख) अक्सर नही, (ग) कभी नही।

१०१. स्कूल मे तुम क्या बनना पसन्द करोगे ?
(क) एक लाइब्रेरियन, (ख) अनिश्चित, (ग) व्यायाम सिखाने का एक शिक्षक।

१०२. तुम क्या पसन्द करोगे ?
(क) अनोखे साहसी कार्यों की कहानी पढना, (ख) अनिश्चित, (ग) स्वय अनोखे साहसी कार्य करना।

१०३. तुम मुख्यत: कैसे व्यक्ति माने जाते हो ?
(क) विचारशील, (ख) दोनों के बीच मे, (ग) क्रियाशील।

१०४. कक्षा मे कोई भी बात करने के पहले क्या तुम सावधानी से निश्चय कर लेते हो कि बात सही है ?
(क) हमेशा, (ख) साधारणत: (ग) प्राय: नही।

१०५. क्या तुम किसी भी पक्ष में निर्णय इसलिये नही कर पाते कि उसके परिणामों से बहुत डरते हो ?
(क) अक्सर, (ख) कभी-कभी, (ग) कभी नहीं।

१०६. क्या तुम्हारी रुचियां :
(क) बहुत सी चीजो पर भटकती रहती हैं, (ख) दोनो के बीच में, (ग) एक या दो महत्वपूर्ण चीजों पर जम गई हैं ?

१०७. जब तुम्हारा कोई घनिष्ट मित्र किसी विशेष अवसर पर तुम्हारी अपेक्षा किसी अन्य व्यक्ति का साथ अधिक पसन्द करता है, तो क्या तुम:
(क) उससे शिकायत करते हो कि उसने तुम्हारी उपेक्षा की है, (ख) दोनो के बीच में, (ग) सोचते हो कि ऐसा तो हो ही जाता है ?

१०८. सामूहिक वाद-विवादो में क्या तुम अक्सर महसूस करते हो कि :
(क) तुम्हारा पक्ष सबसे भिन्न है, (ख) अनिश्चित, (ग) तुम्हारा पक्ष सबसे मेल खाता है ?

१०९. जब तुमको लाइन में खड़े होकर प्रतिक्षा करनी पड़ती है तो क्या तुम प्राय:
(क) शान्ति से प्रतीक्षा करते हो, (ख) अनिश्चित, (ग) अधीर हो उठते हो और बजाय खड़े होने के चले जाने की सोचते हो ?

११०. क्या तुमको ऐसा लगता है कि तुम्हारी भावनाएं इतनी घुट रही हैं कि तुम रो पड़ो ?
(क) अक्सर, (ख) कभी-कभी, (ग) शायद ही कभी।

१११. तुम किस प्रकार के दोस्त पसन्द करते हो ?
(क) जो चुलबुले एवं चंचल हों, (ख) अनिश्चित, (ग) काफी गम्भीर हों।

११२. क्या तुम सोचते हो कि विनम्र होने के लिये यह आवश्यक है कि अपनी भावनाओं पर काबू रखना सीखा जाय ?
(क) हां, (ख) शायद, (ग) नही।

११३. क्या छोटी-छोटी परेशानियों से तुम कभी-कभी बहुत बेचैन हो जाते हो, हालांकि तुम जानते हो कि वह बहुत महत्वपूर्ण नही है ?
(क) हां, (ख) शायद, (ग) नही।

११४. क्या तुम निश्चित हो कि तुमने प्रत्येक प्रश्न का उत्तर दे दिया है ?
(क) हां, (ख) शायद, (ग) नही।

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उत्तर-पत्र

Hindi Version 1967

The Jr.-Sr. H. S. P. Q., FORM . . . . . .

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निर्देश—अपनी पुस्तिका में दिए गए प्रश्न संख्या के अनुसार नीचे के खाने (Box) में एक सही का निशान (√) लगाओ।

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